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CERTAIN DISEASES OF THE NERVOUS SYSTEM OF CHILDREN RESULTING FROM DIFFICULT OR PREMATURE BIRTH.

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Read before the Medical Society of the State of California.

The subject of this paper has not the merit of novelty. The morbid phenomena of which it treats belong to a class of affections which engaged the attention of surgeons long ago, owing to the opportunities they seemed to present for orthopedic treatment. They were brought to the notice of obstetricians especially, in 1862, by Little, of London, who detected the great etiological importance of the abnormal conditions of birth. Nevertheless, the influence of abnormal birth on the subsequent bodily and mental condition of the individual is not yet, as I have been led to believe, sufficiently widely recognized. For this reason, and because the subject seems to me to appeal to a variety of interests, I venture to repeat before you much of what I published[1] two years ago concerning the matter, and to add the results of observations noted since then. These observations relate to certain cerebral palsies occurring in children.

Paralysis depending on lesions of the brain befalls children by no means infrequently. According to their extent the palsies are designated as hemiplegia, paraplegia, or diplegia, the first involving one-half of the body, the second both lower limbs, and the third the lower and upper extremities. The paraplegia and diplegia are peculiar to childhood. All the forms are characterized by more or less hypertonicity of muscles, which interferes with volitional efforts and produces contractures, choreic, and other irregular movements. The rigidity may predominate over the paralysis, and a child thus affected with paraplegia may be able to walk with the thighs adducted and the heels drawn up, knocking its knees and scraping along on its toes. The adductor-spasm in more severe cases causes complete crossing of the thighs.

In diplegia the spastic-paralytic condition may invade not only the limbs, but also the head, the face, and the organs of speech, as a result of which besides the inability to walk and the difficulty in grasping objects, the head wobbles about, the patient drools, makes grimaces, and articulates indistinctly. Not rarely irregular movements of the limbs and grimaces are so prominent in the clinical picture, while the paralytic features are more or less inconspicuous, that the condition is termed spastic chorea. Between extreme cases and the slighter degrees of spasmo-paralysis transitional forms are met with. The intellect may be defective in mild cases and well developed in severe ones. Initial convulsions are frequent, but chronic epilepsy develops less frequently in the cases presently to be considered than in those with a distinct post-natal origin.

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[1] Pacific Medical Journal, July, 1894.

Hemiplegia, paraplegia, and diplegia may set in distinctly and acutely in the first months or years of life; indeed, hemiplegia occurs thus in the majority of instances. But most cases of diplegia and paralysis and a not inconsiderable number of hemiplegia are due to causes operating at birth, and with the etiology of these we are now concerned.

The difficulties of parturition by protracting labor, interfering with its circulation and asphyxiating the child, and demanding the employment of instruments and other artificial manipulations, are responsible for injuries to the brain, of which the conditions described in the foregoing are the clinical manifestations. The troubles experienced by the mother and the consequences for the child are suggested in King Henry's words addressed to the Duke of Gloucester:

> "Thy mother felt more than a mother's pain,
> And yet brought forth less than a mother's hope,
> To wit, an indigested and deformed lump."

Sarah McNutt, of New York, and others have shown that the lesions are due chiefly to meningeal hemorrhages. Hemorrhages occur frequently in the new-born in various important viscera, as demonstrated by Kundrat and by Herbert R. Spencer. The latter has reported an analysis of 130 autopsies on still-born children, and from an abstract of this report I quote the following statement: "The hemorrhages occur in cases delivered naturally, or by version, or by forceps; through normal and abnormal pelves, in primiparæ and multiparæ, with large and small children, in 'easy' and difficult, rapid and prolonged labors. The hemorrhages are, however, most frequent and most severe in children subjected to much pressure by the parturient canal, or instruments, or the hand of the attendant, especially when delivered by the lower extremity. Cerebral hemorrhage is more frequently found in still-born children delivered by the forceps than in those born by the breech, and in these latter more frequently than in those born naturally by the head. These hemorrhages and the accompanying injuries are in many cases the cause of the still-birth, and, when not immediately fatal, may be followed by the gravest consequences." These gravest consequences are exemplified by the affliction of spastic rigidity and palsy.

Professor Schultze, of Bonn, recently disclosed some new facts regarding the localization of hemorrhages in the nervous system of still-born children, showing by careful microscopical examination that they occurred in the medulla oblongata and the spinal cord, and occupied exactly the same site as the characteristic lesion of syringomyelia. Schultze's observations are as yet too limited to permit of any extensive conclusions, but they suggest the advisability of investigating the possible dependence of certain diseases of the nervous system which appear later in life on lesions acquired at birth.

Besides the (traumatic) influence of compression of the skull, of asphyxiation and hemorrhage, there is still another important factor concerned in the production of spastic rigidity and paralysis—this is *premature birth*. Time will not permit me to enumerate and criticise the theories that have been propounded to account for the action of this factor. Suffice it to say, that its influence will appear from the statistics presently to be submitted, and that neither syphilis nor any other disease nor traumatism of the mother, although one or the other may be associated with, or cause, delivery before term, is all-sufficient to explain the production of a spastic condition in the prematurely born child.

Primiparæ having often greater difficulties to contend with, other things being equal, than multiparæ, the brain lesions in question will be expected to occur more frequently in their children than at subsequent births. Thus, Gowers found that in 17 of 24 cases the patients were first-born. In my first series of 12 cases, 8 children were first-born; 2 were second-born; 1 was the third, and 1 the fifth child. In most of the multiparous cases previous and sometimes later confinements were difficult and disastrous.

A very interesting fact is, that among the children born after difficult labor the cases of diplegia preponderate, while premature birth is more likely to cause paraplegia. Thus, Rupprecht, Surgeon to the Children's Hospital, of Dresden, reported 10 cases of spastic paraplegia, in 6 of which birth had occurred prematurely, while in 3 it occurred at term, but in 1 of the latter the mother had met with a trauma during pregnancy, the child was born with difficulty and was asphyxiated; in the history of the remaining case no mention is made of the birth. Of Little's 47 cases, 22 were referred to premature and 20 to difficult delivery; in two other cases a disturbing mental impression on the mother was noted, and in three no etiology was discovered; of the 22 children born before term, 19 had paraplegic rigidity, while of the 20 cases of difficult birth and asphyxia, 12 were diplegic, 6 paraplegic, 1 hemiplegic, and 1 was an undetermined form. In 11 out of 12 cases previously reported by myself, the patients were born at term, all but 1 with the aid of forceps after more or less prolonged labor and in an asphyxiated condition, and this 1 without instruments, but after a very tedious confinement and in a state of profound asphyxiation. Seven of these children have diplegic rigidity, 2 have spastic chorea, and 2 are hemiplegic. The twelfth patient is a seven-months child and has spastic paraplegia.

During the past two years, owing chiefly to the kindness of Dr. H. M. Sherman, to whom I am indebted for most of my opportunities of studying these conditions, I have observed 8 more cases of the kind under discussion. Four of these are instances of spastic paraplegia, and 3 out of the 4 were prematurely born; the fourth came into the world at term, after very hard labor, without the employment of instruments and without asphyxiation, but in a very feeble state. The other 4 out of these 8, are 2 cases of hemiplegia, both delivered at term with forceps and deeply asphyxiated, and 2 of diplegia, 1 of which having been extracted with instruments, at term, after tedious labor, remained in a condition of suspended animation for a long time, while the other readily presented signs of life, but had come upon the scene two months before the calculated date. In 4 of the 6 cases in which the point was noted, the patients were first-born; the 2 others were second children.

Summing up the results of this examination of my 20 cases, we find that 15 were born at term and 5 before term; among the 15 are 8 more or less complete diplegias, 4 hemiplegias, 2 spastic choreas, and only 1 paraplegia; among the 5 prematurely born are 4 paraplegias and only 1 diplegia. These results coincide with those of Little, Freud, and others.

This presentation of the facts bearing on some of the effects of abnormal birth does not claim to be more than cursory. An exhaustive review of the subject would involve the consideration of certain other consequences, especially in the mental sphere. Negative experience would also demand attention and make us pause to inquire why the etiological factors which work such havoc in some cases are inoperative in others. I shall, therefore, proceed to a brief discussion of what has been suggested in regard to prevention and remedy.

The practitioner of obstetrics who would heed the admonitions of various authors must often find himself between the devil and the deep sea. Gowers thinks the injuries suffered by the child are due, not to the forceps, but to the conditions that rendered the employment of the forceps necessary; and Sachs says: "If physicians were more confident of the safety of the forceps and of their own skill to apply the same, protracted labor would not be as powerful an etiological factor as it is at the present time. There is, therefore, a distinct inference to be drawn from these facts, and a word of warning should be uttered to the obstetrician, that, other things being equal, it is wise to curtail the period of labor as much as possible and not necessarily to wait until the child's heart-action becomes feeble. Many children might have escaped epilepsy and idiocy, if the period of labor had been properly managed."

H. R. Spencer maintains the opposite view. After stating that the damage to the child "is most likely to be avoided by preventing premature rupture of the membranes; by artificial dilatation of the parturient canal (when necessary), by restricting the employment of version and other artificial manipulations to urgent cases, and by preferring cephalic to podalic version, in cases suitable for the former," he adds: "The use of the forceps should be absolutely limited to cases in which there exists some pressing danger to mother or child, and it should never be employed merely to shorten labor." Spencer declares that many of the cases which he recorded were clearly due to the forceps and not to the conditions which had led to their use.

The truth appears to be that excessive pressure on the infant's skull, no matter by what mechanism it is exerted, is likely to be disastrous. In my collection of cases there are some in which it is noted that labor was not long, but was terminated by forceps, and there is another relating to a fifth child, born in a country place, where the attendant declined to apply the forceps, saying that physicians in cities were too prone to use them; the second, third, and sixth children of this family were born dead, after difficult delivery and the use of instruments, but I am not informed whether labor had lasted very long before the instruments were resorted to.

It is possible that in some cases the injuries, after difficult or instrumental delivery, are due, partially, at least, to the manipulations employed for the purpose of resuscitating the child. Thus the practice of suspending the infant by the heels may not be altogether innocuous, especially when (as in one of my cases) it is sought to augment the effects of suspension by "cracking the child like a whip."

Radical treatment, surgical or medical, directed to the cerebral lesion itself, is hopeless; brain-tissue, "when once destroyed can never be supplied." Nor is electro-therapy a whit more successful; the employment of electricity in these cases by a physician renders doubtful the soundness of his understanding or the worthiness of his motives. Palliative results are to be expected from orthopedic measures only, and these are indicated chiefly when the rigidity predominates over the paralysis. Great amelioration will not be achieved, but very moderate expectations may be fulfilled.

705 Sutter street.

SOME OF THE NEWER SYNTHETIC REMEDIES.

By G. F. Hanson, M.D., San Francisco, Cal.

Read before the San Francisco Medico-Chirurgical Society.

Although much has been written concerning many of the remedies in the daily lengthening list of synthetics, so much of it has come in the form of printed circulars from the discoverers and manufacturers, that the profession generally has been slow to adopt, and in some cases even to try in practice, the great majority of them. Among the enthusiasts this tardiness has led to the cry of "old-fogyism"—applied, of course, to the other fellow; among the non-believers in things new in medicine to a complete ignoring of their possible virtues; among the conservatives to a disposition to let time winnow the wheat from the chaff, and to "hold fast only that which is good."

Compilation shows that during the past few years the profession has been provided, on an average, approximately, with one new remedy for every two days in the year, and some disciples of the healing art seem to want to try them all. Such practitioners are the *bête noirs* of the pharmacist and add gray hairs to oases on crania not already hopelessly bald. If the druggist's corps of prescription-providing physicians is not large, he soon accumulates a stock of "dead soldiers" on his shelves that remind him at every glance of the array of skeletons within the catacombs; and most of them are infants.

The record of infantile mortality among the new remedies is something frightful, in the opinion of their generators. Some, moreover, are still-born. They never get beyond the precincts of the manufactory. Their eulogy is the boom circular concocted during the throes of labor that turns them out of the chemist's crucible. It speedily becomes a case of Spenser's "Eulogies turned into Elegies." They seldom have an epitaph, for their tombs are often, like that of Moses in the land of Moab, unlettered and unknown. Others eke out an ephemeral existence, for a few days or weeks or months, and then die of marasmus. Their puny lives have been prolonged beyond the period of unaided survival by milk supplied from the breasts of those who are willing to furnish certificates of praise for the monographs setting forth their virtues.

Others endure for years, passing the period of their first dentition through the fostering care of judicious advertising and a fair constitution. Pharmacological pathways are strewn with the bleaching bones of young aspirants for honors at the hands of *medicus doctus*. The medical wanderer through this vale of tears, who is provided with a vivid imagination, may read upon the rude head-boards reared by busy hands above the wayside mounds, some such inscriptions as these:

Here lies the body of Aunty Pyrine,
Entrancing in youth, she ruled like a queen;
Her beaux all declared she was death upon fever
And loyally swore they never would leave her.
But when over-doses in fever brought death,
Her warmest admirers avoided her breath;
Declared she deserved an earlier firin'
And promptly entombed here "Old Mother Pyrine."

We mourn our little Sallie Phen,
  Of few brief months and tender,
But if our prayers can aught avail,
  To Paradise we'll send her.
When left alone she pined away
  And bade farewell to earth,
For all the doctors gave her up;
  They never knew her worth.

The method of arriving at the production of a new synthetic may be of passing interest. A chemist knows that phenacetine, for instance, is produced by the prolonged boiling of para-phenetidine (itself produced by a complex process unnecessary to record here) with glacial acetic acid. He decides to substitute other acids for the acetic, with the same or similar basic groups, and obtains a succession of synthetics possessing various physical characteristics and physiological actions.

To illustrate: by the use of lactic acid instead of acetic he obtains a compound to which has been given the name lactophenine. It occurs as a white, crystalline powder, not particularly disagreeable to take, although slightly bitter to the taste. Its advantage over phenacetine is claimed to be its readier solubility and its adaptability in abdominal typhus. As it is comparatively insoluble (one part in 300 to 330 of water), one fails to see its advantage in that particular respect. My limited personal experience with it is favorable to its use in trigeminal and other neuralgias, and in subacute articular rheumatism. Dose: 8 or 10 grains, on the tongue, with a little fluid after it, repeated *pro re nata* up to 3 or 4 doses. The first or second dose frequently gave relief in neuralgia.

One of the claims of superiority over phenacetine made for lactophenine, seems to be, to say the least, unnecessary. That is "its pronounced soothing effect;" for phenacetine seems, in many cases, to possess the same virtue. One of the best sleep-producers I have used is a solution of phenacetine in brandy, complete or partial, combined with chloralamid, in a vehicle of raspberry syrup. As both remedies are practically insoluble in water, and phenacetine only with difficulty in alcohol, a "shake" label upon the bottle is always desirable.

Other phenetidine derivatives are of comparatively little interest, as little is known of their therapeutics. Those containing the aromatic acid groups, as the salicylic and benzoic, have been proven physiologically inactive, and therefore, of course, useless.

The great impetus given of late years to the construction of synthetic remedies had its origin partly in the prolonged efforts to fabricate quinine, when that staple was commanding anywhere from $2.50 to $10.00 an ounce, wholesale. Like some other discoveries, that one came too late to be profitable, but the gain to science and the world along freshly-opened channels has been inestimable. Another factor in the modern synthetic boom was the astonishing array of products wrested from that apparently simple and ill-smelling substance, coal tar. Their name is legion, and seemingly the end is not yet.

As in the oft-told story of the statue and the knights, wherein a battle was fought to decide a point about which both were proven right and yet both wrong; so as to the merits of many of these newer chemicals we find savants arrayed an either side. Piperazine affords an example. This is obtained as a hydrochloride in the form of shining, silky needles, so soluble and hygroscopic as to require careful protection from the air, and almost tasteless. When piperazine was discovered the chemist, as often happens, was looking for one thing and found another. Spermine was enjoying considerable notoriety, and the chemist's efforts were directed to the construction of a substitute, when he happened upon di-spermine, or piperazine, an ethylene derivative, having entirely different physiological action.

As in the case of nearly all drugs and chemicals used as medicine, whose minor therapeutic virtues are sooner or later almost forgotten in the presence of a prominent one, so piperazine soon came to be considered only in connection with the solvency of uric acid. While it was found that uric acid concretions dissolved quite readily in aqueous solutions of piperazine in the laboratory, certain rational deductions drawn from the results of those experiments were claimed by some observers to be unsustained in the human economy. While some experimenters found that the amount of urea under the use of the chemical was increased and that of uric acid diminished, others failed to confirm that fact—a sequence which would tend to the view either that the effect of piperazine is influenced by as yet undetermined conditions, or that it is not sufficiently positive to replace older remedies.

My slight experience with it leads me to believe it to be, to some extent, useful; but partly on account of its cost and inconvenience of handling, I am more often in the habit of using carbornate or citrate of lithium (effervescing tablets) in Bethesda water. The alleged power of piperazine to dissolve 12 times as much uric acid in cold water as will lithium carbonate, seems not to hold good in the living body. The usual dose is 15 grains dissolved in a pint of water, and taken in divided doses throughout the day.

Phenocoll salicylate, or salocoll, is one of the newer antipyretics and anti-rheumatics which seems worthy of a thorough trial. It is obtained by the substitution of salicylic for hydrochloric acid, with the phenocoll (or glycocoll-phenetidine) base. It is slightly sweetish in dilute solution, of difficult solubility (about 1 in 200 of water), but is said to be reliable and safe, a combination of virtues not too often met with in an antipyretic. The dose is 15 grains several times a day, in powder.

Gallo-bromol, or dibromo-gallic acid, from its reported therapeutic possibilities, should prove a valuable addition to the new list. Having been unable to obtain it in this market, we have been forced, so far, to admire its efficacy as reported by European authors It is said to be a germicide and antiseptic, consisting of white needles, which are readily soluble in hot water, and to the extent of about 1 part in 10 of cold. As its chief indications are in specific affections of the genito-urinary mucous membrane, such solubility is ample. Solutions of 2 to 4 per cent. are recommended for average cases of blennorrhagia, and it is claimed that gonococci disappear after four or five days' treatment. Furthermore, those chronic cases of gleet of many months' duration, which have tried the resources and patience of most practitioners, are said to have yielded in the course of a few days. *Nimium bonum esse verum apparet.*

With many chemists, in following out lines of research, it has been the custom to systematize work by combining certain groups of bases successively with given series of acids, as the knowledge gained during years of earnest laboratory work has enabled them to judge with wonderful accuracy what result certain combinations will effect, even to the color, reaction, and general appearance of the new synthetic. As in the investigation of the primary elements certain missing ones have been foretold, and some of them already found, so in those marvelous benzine, pyridine, and other "rings," the use of substitution radicles for various atoms of the ring in ortho, meta, or para situations, has been reduced almost to an exact science.

Among other findings it has been shown that combinations of the aromatic acid series with molecules of the synthetic antipyretics deprives them of their power of reducing temperature—and in an entirely different direction that from acetyline, $C_2 H_2$, the simplest of the hydrocarbons, can be built up not only the higher members of the hydrocarbon and other marsh gas series, but more practically the long list of beautiful aniline dyes and those illuminating gases which bid fair to reduce one item of our household expenses in the near future.

Bismuth subgallate, the insoluble salt introduced as a substitute for iodoform without perpetuating its odor, bids fair to hold a place for other uses than the one originally intended. It is an almost tasteless saffron-yellow powder, found in the market under the name of dermatol, and is a very stable preparation. The powder does not "ball" or lump (being non-hygroscopic), and its antiseptic power has been established. Aside from its local use as a dusting powder upon wounds and in the various acute affections of the skin, including burns and ulcers, its entire freedom from irritant and toxic effects renders it particularly valuable for internal administration. It has shown itself of service in all forms of diarrhea, particularly the ulcerative.

In one case of typhoid fever, at the beginning of the present year, I gave no other remedy throughout the course of the disease. The boy made a prompt and satisfactory recovery without accident. The temperature was high and diarrhea troublesome when the case was first seen; and as both abated speedily, I am disposed to extend reasonable credit to the dermatol for the result. Four days ago some 4-grain powders of the remedy were prescribed for a little girl of 2½ years, whose movements had been watery, chocolate-colored, and rather offensive for several weeks. This morning the mother called and reported one fecal movement each for the past two days, with some lumpy attempts at a formed consistence. No change had been made in the diet, which had been peptonized throughout the whole period.

It would be impossible to more than briefly mention the apparently deserving of the newer synthetics in the limits of an evening's paper. As for the lengthening list of pretenders—compounds foisted upon the profession as synthetics, when they are really only mixtures, unstable, and often without merit—I have no patience with them. For the genuine, which are proving their value, I bespeak a rational use. There is no reason why we should not modernize our materia medica, still holding to the best of the old remedies, just as we have been modernizing our sanitation, our bacteriology, and our surgery. For while we may suffer frequent disappointments, at times we may rejoice to find that we have been entertaining an angel unawares.

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THE REMOVAL OF FOREIGN BODIES FROM THE SUPERFICIAL TISSUES OF THE EYE AND THE TREATMENT OF THE RESULTING LESIONS.

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Read before the California Northern District Medical Society.

The text books do not give the detailed information in regard to the removal of foreign bodies from the cornea, conjunctiva and sclerotic that should be imparted to those who are occasionally called upon to perform the operation. On that account, and because the presence of foreign bodies is the most common condition of the eye that requires attention, I think the discussion of the subject by the members of this Society, which is composed mostly of general practitioners, will be acceptable and profitable to all.

Although most foreign bodies which have lodged in the superficial tissues of the eye can be easily removed, it occasionally requires the highest degree of skill to save the vision unimpaired. Not infrequently the future usefulness of the patient depends upon whether the foreign body is skilfully or unskilfully removed.

The foreign bodies most commonly found in the cornea and conjunctiva are splinters of iron or steel, fragments of rock, cinders, emery, powder, sand, insects, barley beard, fox-tail, lime, etc.

The condition of the foreign body in regard to its septic state often influences the course of the injury. I have observed suppurative keratitis with hypopion so frequently from neglected injuries produced by pieces of quartz and particles of grain husk, that I am certain the danger from them is much greater than from chips of steel or cinders which have just come from the fire and are therefore aseptic.

Unfortunately the first thing most people do who have received an eye injury is to wipe it with a handkerchief or with the fingers which are loaded with septic germs. The ocular secretions tend to wash away foreign bodies and render the wound aseptic, but they are not always able to counteract this additional infective material.

Patients often consult the doctor for what they consider a "cold in the eye," when a careful inspection will reveal a foreign body to be the cause of the condition. The physician can protect himself from error only by careful inspection of the cornea and conjunctiva for foreign substances wherever symptoms of irritation, watering, congestion, photophobia, etc., are present. A cursory examination is not sufficient, and the cornea should be examined by the aid of a lens by focal illumination and by the ophthalmoscope with a + 15 or + 20 lens. In case these means do not reveal the cause of the trouble, a drop or two of the following solution should be instilled: Fluorescin, gr. x; sodium carbonate, gr. xv; distilled water, ℥i. In case the corneal epithelium is abraded this will produce a greenish discoloration of the injured tissue and will clear up the diagnosis. The examination is greatly facilitated by previously instilling a few drops of a 5 per cent. cocain solution.

It is, occasionally, utterly impossible to make a proper examination of children's eyes without first putting the patient under the influence of a general anesthetic. This is particularly important when there is reason to suspect a barley beard, foxtail, or some similar substance has worked its way into the fornix. By the aid of a lid-retractor and forceps the whole conjunctival surface should be exposed and examined. I have thus occasionally discovered foreign bodies which had been retained for many weeks, or months, causing serious injury to the cornea, the presence of which had not been suspected by the parents nor by the attending physician.

The patient's opinion in regard to the presence or location of a foreign body is of little value. As a rule they insist that it is lodged under the upper lid when it will be found on the cornea. They occasionally insist that a foreign body is present when the irritation is kept up by swollen conjunctival papillæ or by a collection of mucus. Often the foreign body is so small as to be seen with great difficulty, and the patient may at first be incredulous that it was the cause of his trouble.

Many small particles can be removed with the least possible injury to the eye by a pledget of absorbent cotton, wrapped on a cotton carrier, moistened in an antiseptic solution. A stream of warm boiled water flowing from a fountain syringe is most useful in many cases, especially in powder, lime, and other caustics and various kinds of dirt when not deeply imbedded.

For bodies imbedded in the cornea a spud with a dull edge is necessary. This should be carefully inserted under the substance which is lifted out. Scraping and scratching the cornea should be avoided. It is occasionally necessary to use an instrument with a sharp point, like a cataract knife or needle. The electro-magnet is of little use when the steel is imbedded in the substance of the cornea. It is of great service in a few cases in which the steel is nearly through the cornea, lying on the membrane of Descemet. With its assistance there is much less danger of the foreign body falling into the anterior chamber than with the ordinary instruments. It is generally best to enlarge the entrance wound to enable the magnet-point to reach the steel and withdraw it with ease. Where substances not attracted by the magnet—or if an electro-magnet be not accessible—have almost penetrated the cornea, some instrument must be introduced into the anterior chamber and pressed against the inside of the cornea beneath the foreign body while it is being extracted.

The oxidation of iron or steel is likely to leave a brownish deposit on the cornea which should be carefully scraped off. Powder grains should be removed if they can be gotten away without causing too great injury to the central part of the cornea. Much greater harm can be produced by unskilful or too persistent efforts at removing grains of powder than their presence could possibly have caused. A sharp-pointed knife or needle is often the best instrument to employ. When lodged in the ocular conjunctiva it may be necessary to snip out a small piece of conjunctiva to remove the powder grain. The cosmetic effect of their presence in the conjunctiva is the principal reason for removing them from that part of the eye, as they rarely cause much irritation.

The observation of all the rules of aseptic surgery are of the utmost importance in the treatment of all wounds of the eye. To this end all instruments, solutions, and dressings should be sterilized before touching the eye. If the injury has been inflicted by a body that might infect the wound, the whole conjunctival sac should be thoroughly washed with a 1 to 5,000 bichloride solution, iodoform dusted on the wound, and the eye covered by an antiseptic pad and compress bandage. In slight injuries a compress frequently wet in cold water, protection from dust, wind, etc., and rest of the eye for a few days usually suffice.

When the corneal wound has become infected, or is suppurating, prompt and thorough treatment is necessary to save the eye. Thorough cleansing of the wound, iodoform and antiseptic dressings alternating with the application of boiled water as hot as it can be borne for half an hour, two or three times daily, may first be tried. If these applications do not speedily check the progress of the trouble, or if the corneal wound is extensive and suppurating when first seen, it should be cauterized, or subconjunctival injections of bichloride should be made for a few days and antiseptic dressings applied.

I have had the best results from the use of the galvano-cautery in cases of suppurative keratitis with hypopion. The whole surface of the infected wound should be touched with the cautery point at a red heat. Each point must be gently and quickly touched, but great care should be taken to avoid injury to healthy corneal tissue. The eye should be dressed with an antiseptic compress daily after the operation.

Paracentesis of the cornea with evacuation of the contents of the anterior chamber is occasionally indicated, but I have found that since the galvano-cautery and subconjunctival injections have come into use this operation is not so frequently indicated as formerly.

The profession should discourage the practice, which is common in many manufacturing institutions, of workmen removing foreign bodies with a filthy pocket knife, or some other equally dangerous instrument. Inexperienced people should use nothing more dangerous than a clean wet piece of absorbent cotton or a point of clean soft cloth.

It is necessary in injuries from steel, quartz, and other foreign bodies which may have been projected with sufficient force to penetrate the external coats, to make a careful ophthalmoscopic examination of the interior of the eye. If a foreign body be found in the deeper tissues of the eye, means of treatment must be adopted which cannot be considered within the limits of this paper.

In eye injuries atropine is often used when not indicated. In slight injuries of the cornea or conjunctiva, which recover with rest, protection and the application of cold water compresses for a day or two atropine is contraindicated. In cases where the pericorneal injection and irritation persist, or where the iris is congested or inflamed, a 1 per cent. atropine solution should be dropped into the eye once or twice daily. A one-fourth per cent. eserine solution is required when a portion of iris is engaged in the corneal wound, or when there is danger of it becoming so engaged. This should be supplanted by atropine as soon as the danger of the iris becoming engaged in the wound has passed. If the eserine does not promptly disengage the iris it should be freed by gently replacing it with a spatula, or it may be necessary to remove a portion to free it from the wound. In extreme wounds of the cornea, conjunctiva or sclerotic, it is occasionally necessary to use one or two sutures to bring the wound into perfect position. The continuous use of cocaine solution in corneal trouble is generally harmful.

In conclusion, I will recapitulate in concise form some of the important indications that I have tried to bring out in this paper:

1. Every eye in which symptoms of irritation, congestion, photophobia, lachrymation, etc., are present, should be examined with scrupulous care for foreign bodies.

2. In all eye injuries the rules of antiseptic surgery should be carefully observed. Never attempt to remove a foreign body from the eye with an instrument that is not aseptic.

3. Cleanse the eye with a 1:5000 bichloride solution, and apply antiseptic dressings when there is the least suspicion that the wound may be infected.

4. When suppuration of the corneal wound has taken place active measures must be promptly taken to check the trouble. In beginning trouble antiseptic dressings, iodoform, hot water, may be tried, but the galvano-cautery or subconjunctival injections of bichloride solution should be used if improvement is not prompt.

5. Use the greatest possible care in removing foreign bodies from the cornea to avoid injury to healthy tissue. Carefully insert a spud with a dull edge under the foreign body, and lift it out instead of scraping over the body, as is too often done.

6. When the foreign body is iron or steel the electro-magnet is occasionally valuable. When the steel has nearly passed through the cornea it is the safest means of extracting the foreign body. The entrance wound must generally be enlarged to enable the magnet point to come in direct contact with the metallic fragment.

7. Dirt, lime, powder, etc., can generally be removed by directing a stream of warm boiled water against the open eye, assisting the process by gently wiping the foreign substance away with a pledget of absorbent cotton. Caustic substances must be removed with the greatest possible haste.

8. Powder, which cannot be washed away, should be carefully removed by a sharp-pointed knife or needle. Do not dig too energetically, especially near the central portion of the cornea, as much greater injury is not infrequently caused by too persistent and unskilled efforts at removal of powder grains.

9. Powder grains in the conjunctiva are readily removed by snipping off a small piece of conjunctiva with scissors. They rarely cause irritation, but are cosmetically objectionable.

10. After removal of caustics, molten iron and substances which cause extensive injury to the cornea and conjunctiva, great care must be taken to prevent the lids adhering to the eye-ball. The transplantation of rabbits' conjunctiva, or Thiersch's method of skin grafting may be necessary to prevent this unfortunate condition taking place.

429 J street.

HYSTERECTOMY COMPLICATED BY A THREE-MONTHS' PREGNANCY AND A LARGE SOLID ABDOMINAL TUMOR.

By **CHARLOTTE B. BROWN, M.A., M.D.**, San Francisco, Cal.

Read before the San Francisco County Medical Society.

History.—Mrs. F. E. H—— presented herself at my office on February 24, 1896, with the following history: She is 38 years of age, married September 21, 1895, a woman of medium build, ordinary development of adipose tissue, abdomen prominent and much broader than a full term pregnancy. Her face had an anxious expression and dyspnea was marked. Patient had noticed the increase in size of her abdomen for several years, and six months previously had been under treatment to reduce this "accumulation of fat." After marriage the menses appeared three times and were absent after November, 1895. On February 20th, having suffered for some time with irritable bladder and some nausea, she called on Dr. J. L. Carson, of Livermore, and was examined thoroughly, for the first time. The diagnosis of a large abdominal tumor, and from the history a probable pregnancy, was made, and the patient sent to San Francisco for additional opinions.

Examination.—On external examination of the abdomen there appeared a large tumor, oval in shape, occupying the left half of the abdominal cavity, extending to the left border of the ribs and to the right beyond the median line. The surface of the tumor was smooth, no fluctuation was detected, though it gave the impression of viscid contents. In the right iliac region lay a hard, irregular nodular mass extending to the umbilicus. The pelvis was found to be packed with a nodular mass, the cervix could not be reached, a sulcus anteriorly between the mass and the symphysis pubis indicated its probable location. The color of the vagina was violet; nothing about the breasts indicated pregnancy. The pain in the right side for which she had called her physician was still intense, and this, with an irritability of the bladder, causing her to urinate every two hours, night and day, dyspnea, and increasing disability in walking, due to the weight of the mass, made operative interference imperative. At no time had she been troubled with constipation. The possibility of a coëxisting pregnancy was carefully considered. The impaction of the solid tumor in the vagina below the uterus, made any delivery *per vias naturales* impossible; while the size of the abdominal tumor made improbable the carrying of a child to term.

Operation.—The patient was admitted to my private hospital the next day, and with the assistance of Drs. von Hoffman, Mary B.

Ritter, Adelaide Brown, and J. L. Carson, the operation was done two days later. The incision was made in the median line and later prolonged to the umbilicus. On entering the peritoneal cavity, the large mass was found to be retroperitoneal. Its peritoneal covering was incised and the tumor loosened from its capsule. The successful delivery of this tumor necessitated the extension of the incision 3 inches above the umbilicus. The mass was tied off near the brim of the pelvis and removed. The sac was then filled with sterilized gauze, and the contents of the pelvic cavity examined. The irregular mass on the right side proved to be the uterus studded with fibroids, the largest the size of a gull's egg; the color of the uterus was a dark bluish-red, and its walls quite soft, the size about that of a child's head. The diagnosis of pregnancy was confirmed.

As the uterus lay, it was rotated 90° on its long axis, the right ovary lying directly above the symphysis pubis. My assistant held the uterus flexed over the symphysis and by main force, with both hands, I drew up from the pelvic cavity the solid tumor which had been felt from the vagina. This tumor proved to be attached by a broad pedicle to the uterine wall and its descent into the pelvis had caused the rotation of the uterus. The mass was then revolved to the normal position, the ovaries removed, and the broad ligaments ligated and cut. The posterior vaginal vault was opened by the thermo-cautery knife from above, and after stripping the bladder, the anterior vaginal vault was opened in the same manner. The uterine artery on each side was then clamped from the vagina, the clamps including the ligatures of the broad ligament. The uterus and attached tumor were then freed and removed and the ligatures drawn down into the vagina. The clamps were surrounded with iodoform gauze and a Jacob's self-retaining catheter introduced into the bladder. Some 2 ounces of urine were drawn off and the catheter closed with a clamp.

The sac of the large tumor was next drawn up to the lower angle of the wound and partly removed, then stitched to the lower angle of the wound, the gauze sponges removed, and the cavity drained by several strips of iodoform gauze. The peritoneum was closed by a continuous catgut suture, the muscle sheath also, and the skin and adipose tissue were united by silk sutures. Two silkworm-gut sutures were introduced in order to close, later, the drainage site.

The patient made an uninterrupted recovery, the clamps were loosened at the end of 36 hours, and removed at the end of 48—a method of procedure I have found to be excellent in such cases. The bladder was emptied every 4 to 6 hours, and the self-retaining catheter removed at the end of 48 hours. The only disturbance caused by it was a slight tenesmus, which lasted some 24 hours. The abdominal drainage was partially removed after 24 hours, and entirely in 48 hours, and the silkworm suture closed over the site of drainage. The abdominal wound at the end of a month measured 8 inches. The total weight of the masses removed was 20 pounds.

The following report of the pathological conditions found was made by Dr. Philip King Brown:

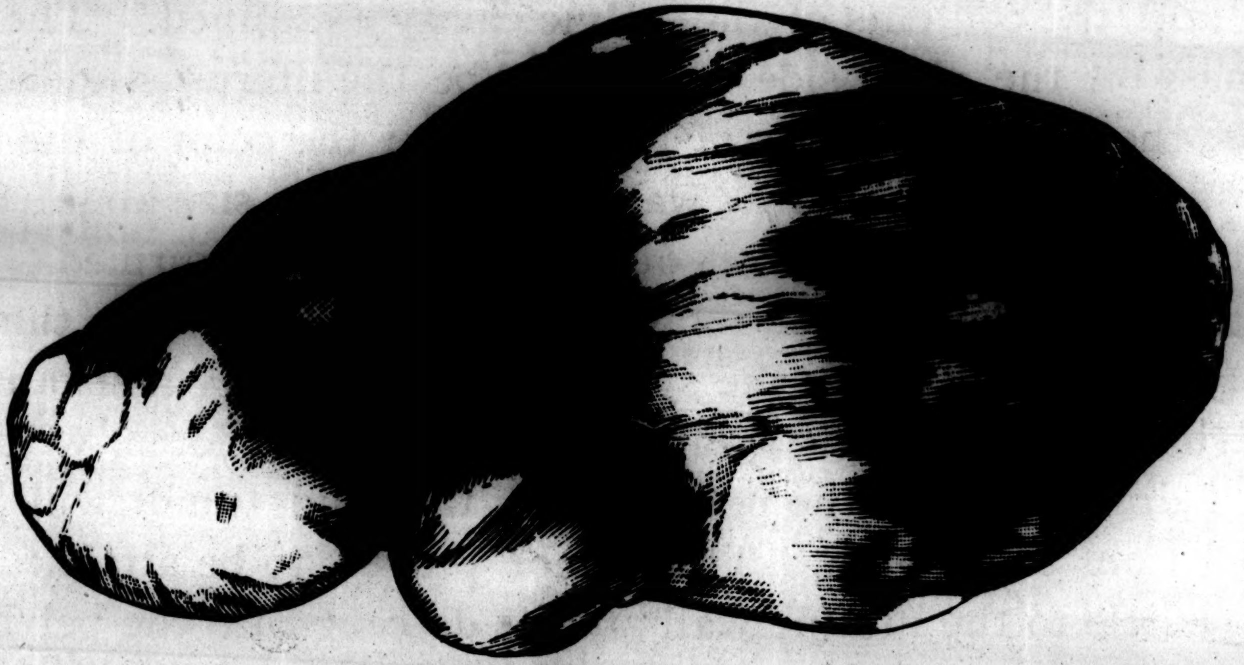

FIG. I. Fibro-lipoma found retro-peritoneal.

"*Pathology Descriptive of Specimens.*—The abdominal tumor presents in growth the appearance of a fibroma 16 by 12 by 5 inches. It has the shape of a kidney, with large projecting lobules varying in size from a grape to an egg, situated along the region corresponding to the renal pelvis. The mass is singularly soft throughout, not even the smallest projecting nodule is hard—suggesting colloid material. The weight of the mass is 16 lbs. The surface is smooth, except for the remains of its peritoneal covering, which can be seen in Fig. I. On section the mass does not present the pearl-white appearance of fibroma, the cut surface has a pale-pinkish gray color, the fibrous structure being interspersed with areas of softer tissue of a yellow color. This appearance is uniform throughout.

Minute Pathology.—The microscopical examination of this tissue explained the gross appearance, it being a typical fibro-lipoma, one of the uncommon varieties of fibromata. The tumor was not vascular, but the few blood vessels were congested, accounting for the pink appearance.

The uterus is the size of a full term child's head and presents on its posterior surface three nodules varying in size from a walnut to a hen's egg and being pedunculated. Attached to the left side of the uterine walls, directly in front of the broad ligament, is a tumor 8 by 4½ by 3 inches, with a pedicle, a thin band of fibrous tissue 1 inch in breadth and 2 inches in length. On the anterior wall, and palpable in it, are several small tumors the size of hazel nuts. All of these tumors present in consistency, appearance, method of growth, and on section, the character of fibromata. The relation of the large abdominal tumor to the uterus is explained by the tendency seen in the other fibromata to become pedunculated. The growth of the tumors necessitated one being forced out of the pelvis, and its increase in size before the uterus became pregnant, stretched its pedicle to a small fibrous cord which was its one point of attachment at the time of operation. The ovaries and tubes were normal, the ovaries showing the effects of compression.

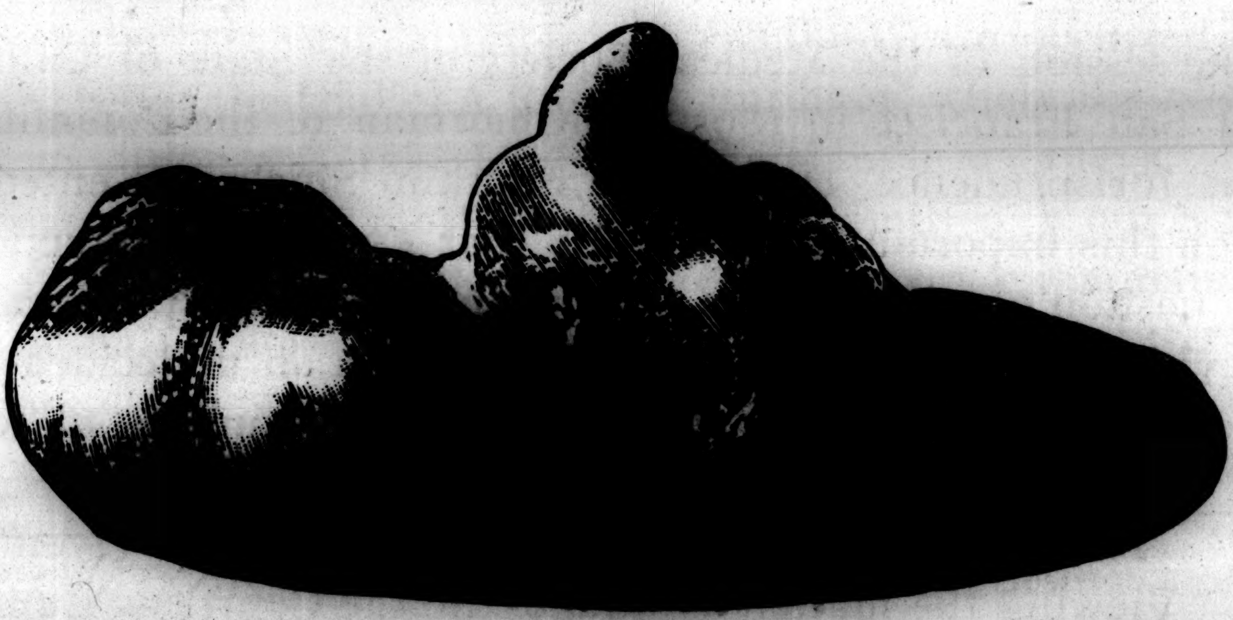

FIG. II. Fibromatous uterus, photographed as fetus was being expelled.

The Uterine Contents.—On opening up the cervix the membranes appeared, and on enlarging the opening in the course of 4 hours the fetus, enclosed in its membranes, was spontaneously expelled as far as the waist line, as shown in Fig. II. Later the ovum, with entire membranes, was delivered by stimulating the fundus, after the method of Credé. The specimen was sent to the Biological Department of the University of California, where it has been preserved in a 4 per cent. formalin solution. The deformity which this fetus presents is due to a failure of closure of the median line of the abdominal cavity and consequent eventration of the abdominal viscera. There is an extreme lordo-scoliosis of the lumbar region of the spinal column, and a very short umbilical cord."

That such a deformity as this can be due to the short cord the following case, which appeared in my practice some years ago, shows: Mrs. R——, primipara, of feeble health, continued in labor several hours after the completion of the first stage. The head did not advance, and as the mother was much exhausted, I applied the forceps. With the greatest difficulty I delivered the head. Body was delayed for some time and, when finally born, was an exact duplicate of this case. The abdomen was open, the liver and intestines were drawn out of the cavity. The cord was only three inches in length. The spinal column was drawn forward by the short cord. The child gasped for a few moments and died. Fortunately for the mother's feelings the face and hands were perfectly normal, and she has been spared knowing the details, believing that the forceps injured the child. She has since borne three normal children.

1212 Sutter street.

THE STATUS OF THE MEDICAL EXPERT WITNESS IN CALIFORNIA.

By G. L. SIMMONS, M.D., Sacramento, Cal.

Read before the Medical Society of the State of California.

At the session of the Medical Society of the State of California, held in San Francisco in 1895, the Chairman of the Committee on Medical Jurisprudence, Dr. George Franklin Shiels, presented a full report on this important subject. In that excellent production the whole question of witnesses, as to facts and medical experts was carefully reviewed, and finding "the authorities in an undecided condition, he thought it wise to interview a select number of leading jurists, including several Judges and ex-Judges of the Superior Court." The result of the interviews, as tabulated, is given as follows: "Viewing the matter as Judges in the Courts of California, and as attorneys practising at the California bar, that in criminal cases, in the absence of an especial statute, and in the presence of a preponderance of precedent, the medical expert witness must give his testimony without other than the fee provided for ordinary witnesses by statute."

In the discussion which followed the reading of the report it was suggested that "a committee be appointed to consult with other medical men, and with prominent lawyers, to draw up a statute which will define the status of the medical expert. It should be made positive that he shall be compensated for his services; and it should also place in the hands of the Judge the power to summon one or more experts, and let the Judge, *in the absence of any law*, decide what their compensation should be." In closing the discussion I took occasion to refer from memory to the fact that about a quarter of a century ago the California Legislature passed a law in accordance with the views of a committee from the Sacramento Society for Medical Improvement, giving to physicians and surgeons and chemists compensation for services as experts. As this law was not incorporated, or even referred to in our Codes, I supposed it had become a dead letter, and that a strong effort would be necessary on the part of the profession to again secure in California a recognition of the principle so plainly stated by the Supreme Court of Indiana, that "the professional knowledge of an attorney or physician is to be regarded in the light of property, and their professional services are no more at the mercy of the public as to remuneration than are the goods of the merchant, or the crops of the farmer, or the wares of the mechanic."

That the opinion in relation to this absence of statute law on the subject of compensation for medical experts in California was general, is evident by the fact that in a celebrated eastern trial, where the statutes of each State are referred to, it is stated that California has no statutes upon this question.

During the past year an important criminal case occurred in Sacramento, being the trial of a Russian murderer, where the plea of an insane condition was raised by the defendant's attorneys. As the crime was one of the most brutal ever committed in our State, for purposes of robbery, the Court ordered an expert examination and report by half a dozen medical men in order to ascertain the mental condition of the prisoner before he should be put on trial for his life. These experts, all busy practitioners, were peremptorily summoned, and spent the better portion of a business day in a careful examination of this self-confessed murderer. For this particular service the sum of $10 each was allowed by the authorities, being (as could have been easily established) a pecuniary loss to several of the experts who had been forced away from their regular calls. This non-appreciation of the value of professional services again brought before us the need of a statute through which we might enforce our just rights in the Courts of the State, and to ascertain the facts in relation to the law which I believed had been passed twenty years ago, I called at the rooms of the new Code Commission, in the State Capitol, and interviewed its Secretary, the Hon. Peter J. Shields. With most obliging promptness he responded to my appeal in the interests of the medical profession, and soon reported that the following Act was passed in February, 1872, and may be found in California Statutes of 1871–2, page 81:

"The Coroner or other officer holding an inquest upon the body of a deceased person may summon a physician or surgeon to inspect the body, or a chemist to make an analysis of the contents of the stomach, or the tissues of the body of the deceased, and to give a professional opinion as to the cause of death.

"Any physician, surgeon, or chemist professionally attending as a witness at an inquest, or upon a trial of any person charged with murder or manslaughter, or in a case *de lunatico inquirendo*, as above provided, shall be allowed a reasonable compensation for such attendance or examination by the Board of Supervisors, upon a written certificate by the Court or officer requiring such services, as to the extent and supposed value of the same; *provided*, that such certificate shall not be conclusive as to the amount of compensation."

This Act is still in existence, and, in the opinion of Secretary Shields, a well read lawyer, is the law of California, its want of recognition by the Code in no way affecting its binding force. It will, therefore, be observed that a majority of our legal and medical men have been laboring under a misapprehension of the facts, and that our statutes, since the organization of the State Society, have acknowledged the principle that a medical expert should be paid a reasonable compensation. As, in the opinion of the Secretary of the new Code Commission, the present law is somewhat narrow in its application, I accepted his proposition to draw an amendment to the Act entitled "An Act to establish the fees of county, township, and other officers, and of jurors and witnesses in this State," approved March 28, 1895, for submission to the Medical Society of the State. It will be noticed that this amendment includes the ideas of Dr. Shiels, that a law on compensation for experts should apply to expert testimony generally, whether it is that of mining engineers, pastry cooks, machinists, or medical men. I append the letter of Mr. Shields, with a draft of his proposed amendment, and hope that by the action and influence of our State organization such a statute may become the law of California.

SACRAMENTO, Cal., April 16, 1896.

G. L. Simmons, M.D., Sacramento, Cal.:

MY DEAR DOCTOR: I enclose you herewith a copy of a bill which I have drawn, and in which I have endeavored to embody your ideas and those of Dr. Shiels, as expressed in his paper read at the meeting of your Society last year. You can examine the same, and, if it meets with your approval, submit it to your Society, and return it with your recommendations, or change it to suit the judgment of the profession. See that when it comes back to me it is in a form which meets with the approval of your Society, and its expressed wish will have much to do with pushing its passage through the Legislature. Hoping this will be satisfactory, I remain very respectfully,

PETER J. SHIELDS.

An Act to amend an Act entitled "An Act to establish the fees of county, township, and other officers, and of jurors and witnesses, in this State," approved March 28, 1895, by adding to the subdivision thereof entitled "witness fees," a provision for an additional payment of expert witnesses.

The People of the State of California, represented in Senate and Assembly, do enact as follows:

SECTION 1. An Act entitled "An Act to establish the fees of county, township, and other officers, and of jurors and witnesses, in this State," approved March 28, 1895, is hereby amended by adding to the subdivision of such Act entitled "witness fees," and at the end of such subdivision, the following: Witnesses summoned as experts, who have no knowledge of the facts involved in the case, but are required to testify as to matters lying especially within their knowledge, skill, or experience, as members of any profession, trade, or calling, in addition to the fee due to other witnesses, shall, in civil cases, be allowed a reasonable sum by the party calling them; and, in criminal cases, a reasonable sum, to be fixed by the Court, and payable out of the County Treasury.

SEC. 2. This Act shall take effect immediately.

212 J street.

THE VALUE OF MINERAL SPRINGS IN THE TREATMENT OF RHEUMATIC AFFECTIONS.

By ROBERT CREES, M. D., Resident Physician Byron Hot Springs, Cal.

Ever since the days of ancient Greece, mineral waters, in the form of baths and drinks, have enjoyed great repute in the cure of certain diseases. Nor was this fame based on superstition alone, as was that of many remedies of ancient times; but on results achieved by their use, notwithstanding the crude methods applied by a people wanting in the necessary scientific knowledge.

Now that the therapy of mineral waters has been studied by scientific men the world over. The revelations of the microscope and of chemistry have led to a truer conception of the nature of disease processes and the results from the use of mineral waters by methods based on these principles are incomparably superior to those of past centuries.

For many years the mineral waters of America have been gaining an ever-increasing favor until now it is no longer just to bring the accusation against our physicians that they are unacquainted with the resources of their native country and that they send their patients to European resorts in no way superior to those at home. Invalids sent abroad are subjected to the worry and trouble of land and ocean travel to reach resorts where climatic conditions at least, are inferior to those at home.

In this latter respect the mineral springs of California are preëminently blessed. Our climate lacks the annual change from great heat to severe cold found in the East. Severe cold is never seen, and although it is sometimes quite hot, the air lacks that humidity that makes the heat of the Atlantic seaboard so uncomfortable and even dangerous. The rain, even in the wet season, is never a steady down pour lasting days and weeks as in other countries which have a wet and dry season. Usually we have a few days of light rain followed by a long interval of dry weather. Lastly, California is entirely free from blizzards and tornadoes, so destructive in other States.

Byron Hot Springs are situated among the foothills of the Coast Range in Contra Costa County, about 70 miles northeast of San Francisco. The springs are about 50 in number, arising in a small valley that gives every evidence of volcanic origin.

Hot springs and cold springs are found within a few feet of one another. Springs impregnated with carbon dioxide are but a few steps from others containing large quantities of sulphuretted hydrogen. Carburetted hydrogen also bubbles up through many of them. Indeed a boring has been made in one place and a receiver and lamp attached.

All of the springs contain sodium chloride in abundance, one called the Surprise Spring being the heaviest natural saline water in the world, containing 18.773 grains of salines to the United States gallon. The other springs vary greatly in their ingredients, some containing ferrous salts in the forms of peroxide and carbonate, others containing sulphate of magnesium in large amounts.

The following table shows some features of the climate at Byron Hot Springs throughout the year:

Month.	Temperature.		No. of cloudy or rainy days.	No. of days with light wind.
	Maximum.	Minimum.		
January	60	41	16	0
February	70	48	7	2
March	73	44	8	4
April	84	51	5	11
May	92	53	5	6
June	104	50	1	10
July	100	60	2	13
August	101	60	1	3
September	94	58	2	9
October	90	54	5	5

There was no day during the year in which the temperature did not reach 55° at some hour. A temperature of 90° or over, considered high in the sultry atmosphere of the East, is comfortably borne in the dry air at Byron. It will be noticed that in only one month (May) were there many high winds, and even then on six days only. One point well deserves attention while dwelling on the climate at Byron. Many persons labor under the impression that the place is solely a summer resort and that in winter the weather unfits it for a sanitarium. Nothing could be farther from the truth. There is no day in which the temperature does not reach 50° or 60° F., the winds are not frequent and even the worst rainy month last year had only 19 cloudy and rainy days. The total rain fall is only half that of San Francisco.

By a judicious use of the various waters many diseases, such as lithemia, gout, etc., are treated with good results, but only their action in rheumatic affections will be spoken of here. It is unnecessary, even if space did not forbid, to enter into all the pathological conditions present in rheumatism, and only a few indications for therapeusis will be briefly dealt with.

Destruction of the organized poisons, now generally conceded to be the cause of rheumatism, must, as in other similar diseases, be the end in view. The only remedies that have so far accomplished this are the salicyl compounds, and in the majority of cases of acute rheumatism these are undoubtedly all that is needed in the way of medication. But we have all seen cases in which none of our remedies have been of any avail; the symptoms have remained, but little if at all abated, and finally the disease has become chronic, in the end resulting in permanent changes in the joints and surrounding structures.

As soon as the salicylates fail, the treatment must be altered; it becomes symptomatic and aims to bring the tissues into such a condition that they can withstand and destroy the poison causing the disease. This result may best be obtained by treating the inflammation according to recognized principles, by neutralizing and causing the elimination of the products of disturbed tissue metabolism, by proper diet and by stimulating tissue change to bring the organism into as high a state of health as possible.

In cases where the inflammatory exudates have become partially organized, we must endeavor to cause their solution and absorption. These various indications are in no way more appropriately met than by treatment with the proper mineral waters and baths, especially when such treatment is directed by a physician who has made a study of balneology.

Three of the springs at Byron are used in treating rheumatic troubles. Their analyses are as follows:

No. 1.

Mineral ingredients.	U. S. gallons contains grs.	Mineral ingredients.	U. S. gallons contains grs.
Sodium Chloride	274.93	Calcium Sulphate	.85
Sodium Carbonate	000.21	Ferrous Carbonate	.86
Potassium. Chloride	36.02	Ammonium Chloride	.09
Potassium Bromide	Trace	Barium Carbonate	.17
Potassium Iodide	0.05	Silica	2.00
Magnesium Chloride	2.06	Organic Matter	.06
Magnesium Carbonate	12.11		
Calcium Chloride	96.54	Total solids	706.94
Calcium Carbonate	.68		

Gases: Free Carbonic Acid Gas 3.00 cubic inch.

No. 2.

Mineral ingredients.	U. S. gallons contains grs.	Mineral ingredients.	U. S. gallons contains grs.
Sodium Chloride	274.93	Calcium Sulphate	36.05
Sodium Sulphate	42.16	Calcium Carbonate	3.09
Potassium Chloride	26.40	Ferrous Sulphate	.76
Potassium Iodide	.32	Ammonium Chloride	Trace
Potassium Bromide	Trace	Silica	5.62
Magnesium Chloride	2.06	Organic Matter	7.34
Magnesium Sulphate	19.60		
Calcium Chloride	7.50	Total solids	425.83

Gases: Free Carbonic Acid Gas ... 17.75 cubic inches
Free Sulphuretted Hydrogen ... 14.50 cubic inches

No. 3.

Mineral ingredients.	U. S. gallons contains grs.	Mineral ingredients.	U. S. gallons contains grs.
Sodium Chloride	622.07	Calcium Carbonate	.59
Potassium Chloride	33.74	Barium Carbonate	.93
Potassium Iodide	.79	Ferros Carbonate	.72
Potassium Bromide	Trace	Ammonium Chloride	3.05
Magnesium Chloride	3.92	Silica	1.00
Magnesium Carbonate	15.75	Organic Matter	Trace
Calcium Chloride	85.37		
Calcium Sulphate	1.12	Total solids	769.05

Gases: Free Carbonic Acid Gas ... 7.82 cubic inches

The imbibition of water is always indicated in disease when a rapid change of tissue, together with increased elimination of pathological products, is desired. The view that the drinking of large quantities of water dilutes the blood and tissue fluids is now no longer held; thus Becker has shown that half an hour afterward these fluids are less watery than after twenty-four hours abstinence from water. It has also been shown that it is not the aqueous element alone that is increased in the diuresis resulting after large draughts of water, but that the solids, especially urea, the phosphates and sulphates, are present in larger quantities. This increased elimination of urea is accompanied by augmented consumption of oxygen and elimination of carbon dioxide.

Water, and especially hot water, acts locally on the gastro-intestinal tract as a cleansing and anti-fermentive agent, and for such purposes should be taken as hot as possible and some time before eating.

The constituents present in greatest abundance in these springs are the chlorides, especially the chloride of sodium. This salt increases the action of all the mucous membranes of the body, but as might be expected, exerts its most potent influence on that of the stomach and the intestines. It increases the formation of gastric juice, bile, pancreatic juice, and other intestinal fluids; it dissolves mucus and stimulates endosmosis of the products of digestion. The peristaltic action of the intestine is increased by it when the quantity present is sufficiently large; after being absorbed, it stimulates tissue change and increases the blood's solvent power over albumin.

The well known stimulating effects of carbon dioxide on the digestive tract need not be mentioned. The alkaline salts present neutralize any acid, such as lactic, that may be present in the blood and tissues, render the urine alkaline, and, as they are taken before meals, assist in stimulating the flow of gastric juice.

The effect of the other ingredients in the water are not as yet thoroughly understood, but they undoubtedly assist in the diuretic laxative and alterative actions. The action of the various salts in the hot bath is probably due to counter irritation, as it has been proved that non-volatile salts are not absorbed by the skin. This is, of course, of no import, as the water is drunk in large quantities.

Hot baths, by dilating the cutaneous arterioles, withdraw the blood from the congested areas of inflammation, the contained salts by counter irritation stimulate the deeper circulation, and as a result instead of the stasis there is a free flow of blood which is deprived of its injurious products by diaphoresis, diuresis, etc., and contains medicaments which stimulate tissue change and absorption of inflammatory products. The tension of the vessels being nearer the normal, exudation ceases and absorption more easily takes place, pressure on the nerve endings thus become less and pain is relieved; hot baths also stimulate the action of the sweat glands and cause increased elimination by this channel, the excretion of lactic acid, which McLagan states is one of the causes of pain and irritation, though not of the disease itself, is especially increased.

Method of Treatment.—If the patient has had a regular diet prescribed for him by his physician this is rigidly adhered to, otherwise the diet deemed most appropriate by the resident physician is ordered.

A half pint of the No. 1 or hot salt water spring and a similar quantity of the No. 2 spring is taken before breakfast, the former purges without griping; the latter is markedly diuretic. This last is drunk again about an hour before each of the succeeding meals. The patient is carefully advised at all times to drink the water before meals.

As might be expected, he who takes the waters soon after eating and interferes with the delicate workings of the gastro-intestinal canal by prematurely evacuating or neutralizing its contents, instead of being benefited suffers harm, as evidenced by nausea, loss of appetite, and entire lack of relief from his disease.

Hot baths are given at first every day. The temperature of the first days' bath is 100° F., and this is increased day by day until it reaches 110° or 112°. The patient is then put in the mud bath daily; and, after the bath, is usually given a blanket sweat, and, if indicated in his case, massage. Immediately after the bath, the patient is advised to go to his room and remain until any risk of chill has passed. As the passageway between the hotel and the bath is covered, there is but little danger of getting cold on the trip between.

The effect of this treatment is soon seen in increased appetite and in diminished pain and stiffness of the joints. Thus cases of acute rheumatism can usually walk in four or five days, and may expect complete recovery in from three to six weeks. In subacute and chronic cases, when there are no permanent joint changes, the results are fully as good, although the duration of treatment is somewhat longer, or about two to four months.

A PLEA FOR A MORE AGGRESSIVE TREATMENT OF PERITONITIS.

By J. B. Rosson, M.D., Tulare, Cal.

Read before the San Joaquin Valley Medical Society.

All physicians know the diagnostic symptoms of peritonitis, but not all, especially among the younger men, know that there are very few cases of idiopathic peritonitis. Flint, as far back as 1866, said that idiopathic peritonitis was very rare, and, perhaps, if he were alive to-day, he would speak with even greater emphasis than he did then. Investigation of the etiology of that disease has since been more thorough. Many years ago we were taught the diagnostic symptoms of the disease, and told of opium as the sheet anchor, and not a word was said about the surgical side of the question. The rareness of the occurrence of idiopathic peritonitis shows the folly of depending upon opium in all cases.

While opium may be a curative remedy in the idiopathic variety, if there be any of that kind, it is only useful to relieve pain in the purulent form. I have seen many *post-mortem* examinations of patients who have died of this disease, and have never seen a case which was not symptomatic or traumatic. In all cases but one I have found much pus in the abdominal cavity, in that case, resulting from a tubal pregnancy, there was a small amount of pus with a large quantity of clotted blood and serum when I performed the laparotomy for its relief, four days after the rupture of the cyst. The other cases were the result of the rupture of the walls of a pus cavity, the bursting of the intestine in typhoid fever, and in one case a puncture of the intestine by a sharp bone that had been swallowed.

The question then arises: Is peritonitis ever an idiopathic disease?

Does its treatment not demand all the surgical knowledge and skill in operating that can be brought to bear at the present day of asepsis and antisepsis? Are our physicians as bold as they should be in the treatment of these cases? Do they take the necessary pains to make an early diagnosis in affections which lead to these grave results? I believe that peritonitis is nearly always a surgical disease; and I feel confident many will agree with me that we are not as prompt as we should be in the surgical treatment of this disease, and that we are, many times, not careful enough in the examination of cases which complain of pain in the abdomen. Our examinations are often too superficial. By diagnosing appendicitis, pyosalpynx, and other purulent diseases at an early date, we may operate and head off a fatal peritonitis. The early diagnosis of a tubal pregnancy is also very necessary.

When a pus sac has ruptured into the abdominal cavity, and a peritonitis has begun, if we have not been able to diagnose the case, instead of relying on that deceptive remedy, opium, as a curative agent, we should make an exploratory incision, find out what is the matter with the patient, and thoroughly wash out and drain the abdominal cavity. This is by some considered a desperate remedy; but I am here to say this is a disease that admits of no conservatism. Conservatism in purulent peritonitis means a funeral at short notice. Laparotomy, thorough washing out and drainage, is the only treatment which will give the patient any show whatever for recovery. Opium or any other medicine is worse than useless as regards radical cure. Opium masks, deceives and hurries your patient on to an easy death. Veratrum viride and other artificial sedatives which enjoy a reputation in the treatment of other serous membranes only facilitate death, the inevitable result of purulent peritonitis, when treated non-surgically. Permit me now to report a few cases illustrative of these views, which I have seen examined *post-mortem:*

CASE I.—Mrs. C——, complained several days of pain in the right iliac region, and laughingly said she thought she had appendicitis. She was not bad enough to stop riding her bicycle for some time. One evening she took a buggy ride and had to return on account of an increase of the pain. The next morning she felt more comfortable, but sent for her physician, who did not realize the danger of the case, it seems, on account of the apparent mildness of the symptoms. She suddenly got worse, and soon there was general tenderness and pain over the abdomen and rigidity of the abdominal muscles. The case in a day or two passed beyond all hope, even from an operation. On *post-mortem* examination a large quantity of bad smelling pus was found in the abdomen. A general purulent peritonitis had resulted from rupture of a suppurating appendix. A hard fecal concretion, the size and shape of an olive seed, was found in the appendix.

CASE II.—Y——, a butcher of our town, had been the victim for many years of attacks of pain in the right iliac region, from which he had recovered. These attacks were what is known as recurrent appendicitis. Last summer he was attacked in the same way. He was given a hypodermic injection of morphine, and was able to get up the next day. On that day he went across the town a short distance with his family on a visit. On his return in the evening he was seized with pain in the abdomen and vomited. Soon symptoms of peritonitis began, and still morphine was relied upon. The peritonitis increased and depression soon began to appear. He was laid on the table and chloroformed, but his heart failed so rapidly that all agreed he was unable to stand the operation. On *post-mortem* examination pus was found in large quantities, and a mass of fecal matter, olive seed in shape and size, was found inside the ruptured suppurating appendix.

CASE III.—A gentleman of our town about three months ago was suffering from a strangulated inguinal hernia. It was with difficulty reduced by my friend, Dr. Alford. His bowels, however, would not move, and tympanites was quite prominent as a result of the obstruction which still continued. Dr. Alford very kindly invited all the local physicians to see the case, and we agreed that a laparotomy should be performed to relieve the obstruction. The patient objected so strongly that it was, unfortunately for him, not performed. Dr. Alford, however, succeeded in moving his bowels by means of injections. Then we thought we had been mistaken in recommending an operation. The patient got better and was able to walk about, but complained of soreness in the region of the hernia, and was compelled to take medicine continually to move the bowels. Dr. Alford was particular to have him live on liquid diet. A few days ago he sent for the doctor, and told him he felt something tear in the abdomen. Peritonitis began immediately, and he died in four days.

At the autopsy, upon opening the abdomen, a large quantity of pus escaped. All the lesions of purulent peritonitis were present. In the right inguinal region against the internal ring the intestines were adherent. They seemed to cross and overlap each other. The lumen of the bowel was narrowed, causing an obstruction to the passage of the contents. The narrowing of the bowel seemed to be due to its frequent passage through the ring, as well as perhaps to adhesive bands. The intestine had ruptured, and the peritonitis was caused by the escape of fecal matter. By close examination it was ascertained that the rupture was caused by a piece of bone about an inch long and sharp at one point. He had swallowed the bone, and the narrowed bowel would not admit of its easy passage; it was perhaps located crosswise, and the obstruction of the bowel was caused by the accumulation of fecal matter above the bone. The accumulation finally moved past the bone, and the latter remained to make its way out of the bowel into the peritoneal cavity three months later. We, therefore, found we would not have been mistaken in operating at first as had been agreed upon. This man might have been alive and well to-day if he had consented to comply with the request of his physician.

Purulent peritonitis may result from extra peritoneal suppuration. These cases sometimes occur as circumscribed abscesses between the peritoneum and abdominal wall, which break through the peritoneum into the cavity and cause general purulent peritonitis.

CASE IV.—I was called once by another physician, Dr. McMillan, of Shiloh, Illinois, to see a little girl, 5 years old, who had had fever for five days. She had all the symptoms of peritonitis, and the abdominal wall was very tender to the right of the umbilicus. We diagnosed purulent peritonitis, opened the abdomen, and washed out and drained the cavity. We found that an abscess had formed extraperitoneally, and had bursted into the abdomen. The case made a good recovery without a hernia.

CASE V.—A lady had complained for some time of pain in the region of the stomach. I examined her carefully; there was some tenderness and a distinct hardness in the abdominal wall just above the umbilicus. I told her I thought suppuration had occurred. Upon introducing an exploring needle I withdrew some pus and the patient agreed to an operation. On cutting down upon the mass we found that pus had formed between the omentum and abdominal wall. The omentum was nicely adherent to the wall of the abdomen around the pus, thus inclosing it, and preventing its escape into the surrounding parts. The cavity was washed out carefully and drained, and the patient made a rapid recovery. It is surprising how thick and strong the omentum will become in these circumscribed inflammatory cases.

The importance of the early diagnosis of tubal pregnancy, with the result when left untreated, is shown by the following case:

CASE VI.—A short time ago I was called to Delano, to see a lady, with Dr. Mitchel. She was suffering from peritonitis. The history of the case showed she had had left ovarian pain for three years. The attacks were paroxysmal. For several days she had been flowing slightly. Four days previous to my visit, Dr. Mitchel discovered a tumor in the left ovarian region, about the size of two fists. She complained of its "pulsating," as she explained it. Three or four hours after the doctor had found the tumor, he was summoned, and he was then unable to find it. The tumor had suddenly disappeared. Patient did not seem to be shocked or depressed at the time, as is usual in such cases. However, she began to have pain, the abdomen swelled and became very tender, with a rapid pulse and high temperature. We agreed it was a case of peritonitis, resulting either from the escape of pus or of a fetus which had formed in the fallopian tube. We agreed to make an exploratory incision, proceeding further if necessary, and the family consented. Under chloroform an incision was made, large enough to admit the index finger. Finding the abdomen full of clotted blood and serum, we enlarged the incision to 6 inches, turned out the clots, and found a three months' fetus in the lower part of the pelvis. The sac containing it was still intact, but ruptured in the effort to remove it. The placenta was partially detached, hence the hemorrhage. The left ovary was so involved that it came away with the placenta, which was easily removed. After thoroughly cleansing and draining by means of gauze, through the vagina, we closed the abdomen with silkworm gut. Patient rallied from the chloroform, and the pulse ran up to 130, but in a few hours it came down to normal, and so did the temperature. She was cheerful and called for nourishment. She did well for 48 hours, when the pulse again came up, tympanites developed, and death ensued at the end of four days.

The question is, would not the patient have had a better chance, if she had been operated upon when the tumor first disappeared? She had been married about sixteen years, and had never conceived before, and this fact tended to dispel the idea of tubal pregnancy in our discussion and consideration of the case before the operation. Absence of shock also pointed to a negative conclusion in this regard.

The diagnosis of appendicitis is not always easy, as is demonstrated by the following case:

CASE VII.—A boy, about 7 years old, was sitting on a gate post. A companion slipped up behind him and pushed him off. He fell and bruised the gluteal muscles, apparently not seriously, as he could walk well immediately after the fall. That night he complained of soreness. The next day he was attacked with a severe sciatica, showing that the sciatic nerve was injured somewhere in its course. In a few days he became very tender in the right iliac region, and there was some tympanites. Thinking he had appendicitis, we made preparations to operate. After a more careful examination we concluded that it was not that disease, and the boy, after a long and tedious illness, recovered.

The diagnosis we finally made was inflammation of the illiacus muscle, which we could readily determine by palpating the abdominal wall. One characteristic symptom of that trouble was present in his case, viz: a tendency to flex the thigh upon the abdomen. It evidently, however, was not a purulent disease, as no pus ever made its exit. The peritoneum was believed to be inflamed, as the tenderness of the abdomen and tension of the abdominal muscles showed. The long continued and severe sciatica doubtless resulted from pressure upon the nerve in the pelvis. I have never been satisfied as to the precise nature of the original lesion.

I could report many such cases, which, to me, are very interesting, but time will not admit of it. I have had some sad experiences in purulent peritonitis, and I hope, therefore, to be better prepared to act judiciously in these cases in the future. I have heard physicians talk of epidemic peritonitis of an intractible nature. These cases were thought to be idiopathic. Since my own sad experiences in these so-called epidemics, I have learned that nearly all of them are caused by appendicitis; for appendicitis apparently occurs as an epidemic sometimes. My experience is that these cases generally occur in the spring or summer, but why they should be more frequent at this season I do not know.

What are we to learn from a report of these cases? Speaking for myself, I shall be more prompt to operate in the future. I shall take greater pains in the examination of patients who complain of pain and tenderness in the abdomen. Patients will walk about with a gangrenous appendix, when adhesions have confined it and its contents. When these diseased appendices are not confined by adhesions, they are as fatal as any disease can be. Tubercular meningitis is not more formidable after they have passed beyond the time to be benefited by an operation.

Post-mortem examinations make us better physicians, but, strange to say, people are still opposed to them in many cases. We have had quite a number at Tulare, and all of us have been much benefited. Another thing that makes us stronger as physicians at Tulare, is the fact that the doctors are on good terms, and we are not so jealous of each other that we will all combine in the management of these bad cases. We are all present at autopsies and surgical operations, and the opinion of every one is respected. Such a method gives strength of character and confidence in the success of a difficult undertaking. It is also conducive to the confidence and respect of the people, in our profession, and in us as individuals.

If what I have said in the report of these cases should cause any physician present to be more aggressive in his treatment of peritonitis, and prompter and bolder in his surgical work along this line, it will have accomplished all I could hope.

DEPARTMENTS.

OBSTETRICS, GYNECOLOGY AND PEDIATRICS.

By WALLACE A. BRIGGS, M.D., Sacramento, Cal., and

WM. FITCH CHENEY, B.A., M.D., Adjunct to the Chair of Obstetrics and Diseases of Women and Children, Cooper Medical College, San Francisco, Cal.

Tubal Pregnancy After Hysterectomy.—WENCHLER reports the following case: Hysterectomy in 1885; cessation of hemorrhage; fairly good health since operation, except monthly discomfort ascribed to suppression of menses. When Wenchler was called, seven months after operation, this periodical molimen had been absent for eight weeks, distressing nausea was present, abundant hemorrhages had occurred and been repeated two or three times. The vagina was filled with clots, the abdomen slightly tympanitic and tender; uterus absent; in the upper part of the vagina to the right a cystic tumor with very short pedicle; in the region of the right tube a soft tumor about as large as a hen's egg. By the speculum the pedicle of the small vaginal cyst was seen to arise from a narrow opening at the fundus of the vagina, from which blood was escaping freely. On compressing the cyst with a forceps the pedicle became distended, and hemorrhage ceased. Diagnosis of tubal pregnancy was made; the ovum developing in the neighborhood of the uterine cornu; the fetal envelopes escaping from the dilated tubal orifice, and forming the cystic tumor, protruding into the vagina. The sac was punctured, the membranes were seized by forceps and carefully extracted, and finally the tubal pocket was curetted and tamponed with iodoform gauze.—*Union Medicale*, March 21, 1896.

A New Method of Vaginal Antefixation of the Uterus.—WERTHEIM, of Vienna, first published in March, 1896, a new method for overcoming retroversion of the uterus by an intra-peritoneal shortening of the round ligaments. He has recently published another article stating that further experience with his operation only confirms his former views. He advises the opening through the vagina of the anterior peritoneal pouch, between bladder and uterus, the freeing of the uterus from all adhesions and its replacement forward, and then the stitching of the round ligaments into the wound to an extent sufficient to hold the organ anteverted. Bode, of Dresden, has tried this method in several cases and thinks it superior to fixation of the fundus forward, or to any of the other operations for retroversion.—*Centralblatt f. Gynäkologie*, March 7, and May 2, 1896. This same method seems to have occurred to a number of different operators about the same time. VINEBERG, of New York, and BYFORD, of Chicago, both describe operations very similar to that of Wertheim, performed almost simultaneously with his. Their papers are published in the *American Gynecological and Obstetrical Journal*, June, 1896.

SURGERY AND ANATOMY.

By T. W. HUNTINGTON, B.A., M.D., Surgeon Southern Pacific Company's Hospital, Sacramento, Cal., and

GEO. B. SOMERS, M.D., San Francisco, Cal.

Treatment of Fractures at Lower End of Humerus.—Regarding the question of position, DR. C. A. POWERS has gathered the testimony of 650 cases in favor of the angular position. In reference to the straight position he says: "The surgeon who sees many of these fractures will obtain satisfactory results under any form of treatment which his experience and judgment may lead him to adopt, but for the general practitioner, who sees these cases but seldom, to treat them in extension seems to me unwise."—*Medical Record*, May 2, 1896.

Disadvantages of Non-absorbable Sutures in Operations for the Radical Cure of Hernia.—DR. W. B. COLEY says (*New York Medical Journal*): My personal experience with non-absorbable sutures in hernia operations is confined to three cases, in which silk was used. In one of them, operated by Czerny's method, the wound healed by primary union, but soon after leaving the hospital a sinus formed in the cicatrix and refused to heal until the offending sutures had been removed. The canal had been so weakened by the suppuration that relapse occurred three months after the operation, although a truss had been worn the entire time. A second operation was then performed by

Bassini's method, with kangaroo tendons for the buried sutures, and the patient is now sound, three years after, without having ever worn a truss. In two cases operated on by the Bassini method, silk was used, and both failed to heal by primary union. In 250 cases of hernia operations in which I have used kangaroo tendons for buried sutures, I have not had a single instance of sinus formation, and the percentage of primary unions has been 96 per cent.—*Medical and Surgical Reporter*, March 28, 1896.

Radical Operation of Reducible Hernia.—GREIFFENHAGEN (*St. Petersb. med. Woch.*) discusses the position of this operation to-day. He states that the present status of the operation has entirely altered the indications for operation. It should be performed in all cases of herniæ that cannot be replaced or are difficult to retain by a truss, and that have shown a tendency to inflammation. Further, the operation is indicated in the following conditions: (1) In all free herniæ that are difficult to retain or are only partially retained by a truss and where the truss cannot be worn comfortable. (2) In middle-aged and young persons of the working classes, who cannot afford to buy a good truss and renew it when necessary. (3) In children, and especially in large herniæ. (4) Finally, patients should be operated upon if they so desire and wish to be free from the inconvenience attending the wearing of a truss. The contraindications are a hernia so large that it cannot be returned into the abdominal cavity, and systemic conditions that contraindicate all forms of operation. The best results are obtained in small, free, relatively recent herniæ in young persons, in which there have been no adhesions formed and there is not much motion. The greater the amount of adhesion between the sac of the hernia and the canal, the more difficult the *technique* and the less are the chances of a permanent cure. The author is divided in his opinion as to the best operation, preferring, according to the case, Mosuren's, Kocher's, Bassini's, and Frank's methods.—*American Journal of Medical Sciences*, May, 1896.

OPHTHALMOLOGY, OTOLOGY AND LARYNGOLOGY.

By WM. ELLERY BRIGGS, M.D., Sacramento, Cal.

Abnormal Nasal Secretion.—DR. THOS. F. RUMBOLD describes many injurious effects of abnormal nasal secretion, among which are trouble with the eustachian tube, the middle ear, and, in infant life, even pneumonia. In childhood the secretion is more acrid, and may cause the growth of adenoids in the vault of the pharynx and hypertrophy of the faucial tonsils. Later in life the secretion irritates the nasal mucous membrane so as to slightly impede nasal respiration. The long continued flow of this secretion from the nose into the stomach is the cause of much disease. Patients who are subject to exacerbation of abnormal nasal secretion in the spring and fall suffer at such times with stomach disturbances. Uniform improvement of the stomach symptoms has been observed by the author from treatment of the nasal trouble.—*St. Louis Medical and Surgical Journal*, May, 1896.

Sponge Grafting in the Orbit for the Support of an Artificial Eye.—DR. E. OLIVER BELT has devised a method by which the socket gives a good support for an artificial eye. The enucleation is performed as usual under strict antiseptic precautions. After all hemorrhage is arrested the socket is washed out with a 1:1000 formaline solution, followed by sterilized salt solution. A globe of fine soft sponge about three-fourths the size of the eyeball (previously sterilized in a 5 per cent. formaline solution and rinsed in the salt solution) is then inserted into the socket, or capsule of Tenon. The conjunctiva is brought together and sewed with rat-tail sutures. The lids are then closed with compress and bandage. In a few weeks the sponge is filled with new tissue, which in time becomes firm, solid flesh, making a full orbit and a fine support for the artificial eye.—*Medical News*, June 27, 1896.

DERMATOLOGY, SYPHILIS AND VENEREAL DISEASES.

Treatment of Acne.—BARDACH (*Dermat. Ztschr. f. Get. u. Gyn.*), concludes that the increase in the solids of the blood causes an irritation of the sebaceous glands. A quick cure is effected in these cases by increasing diuresis. For local treatment he suggests a soap containing about 1½ per cent. of iodate and bromate of sodium.—*Therapeutic Gazette*, July, 1896.

Prevention of Gonorrhea.—VON NEISSER (*Centralblatt f. die Krankh. der Hard und Sexual Organe*) quoted from *Berl. klin. Woch.*, has theoretically confirmed the method of preventing gonorrhea advocated by Blokusewski-Daum. This method consists in dropping into the meatus, the lips of which are held open, two drops of a 10 per cent. solution of nitrate of silver. One drop is allowed to run over the frenum. Fifty patients adopted this treatment without experiencing the least irritation. Five seconds' application of this solution always inhibited the growth of the gonnococcus when cultivated in artificial media. Weaker preparations are unreliable.—*Therapeutic Gazette*, July, 1896.

Gonorrhea.—DR. JANEL (*Ann. des Mal. des Org. Gen.-Urin.*) uses potassium permanganate in the acute state to prevent chronic inflammation of the urethra. The parts are thoroughly cleansed to remove all the gonococci possible and to prevent secondary infection. A dilute solution of sublimate should also be used. Superficial and fresh lesions of the bladder should be washed and treated with a solution of nitrate of silver administered a drop at a time. After infective germs are destroyed it is proper to begin instrumental examination. Superficial and fresh lesions may be treated as above, deeper and old lesions with dilatation, and localized inflammations with the urethral endoscope. Both parts of the urethra must be treated, even though the penile portion alone shows lesions. Dr. Shoemaker thinks rest an important element and advises keeping the patient in bed a week, after having first given a saline cathartic. All condiments and stimulants should be forbidden. The penis and scrotum should be supported. A blennorrhetic should be administered in small doses and the amount increased to the limit of toleration. Copaiba and cubebs may be given alone or in combination; an alkali may be given in addition, and in case of great pain a small quantity of morphine sulphate. Oil of sandalwood 2 or 3 times daily, in 5-minim doses, is also an effective remedy.—*Medical Record*, July 11, 1896.

MATERIA MEDICA AND THERAPEUTICS.

By WM. WATT KERR, M.A., M.B., C.M., Professor of Clinical Medicine, University of California, San Francisco.

The Real Status of Kola.—It has been asserted, and with some show of scientific observation, that kola is peculiar in its powers and possesses medicinal virtues of unusual noteworthiness, but we have yet to meet, in actual practice, with any case which has been benefited by it any more than it would have been by similar doses of caffeine, which is its chief, if not its only, active ingredient. Certainly it possesses none of the peculiar properties of cocaine as a stimulant and general systemic supporter, and its value in the treatment of diarrhea is of no moment as compared with the powers of such old and homely remedies as kino and catechu. We may reach the conclusion, therefore, that the practical clinician has gained little by the introduction of this drug, since it possesses no peculiar properties which cannot be eqnaled by older and better known remedies. So much for the subject of kola from the point of view of the reputable physician; and if its history stopped here, but little more need be said. Unfortunately, however, its discovery and scientific testing has been accompanied by the publication of pamphlets lauding its medicinal virtues to the skies; and these circulars have not only given an erroneous idea of its value to those physicians whose use of it has been limited, but have led manufacturing and retail druggists to place upon the market various preparations of the kola nut designed not for the use of the physician who finds his patient needing a stimulant, but for direct purchase by persons who, possessing no knowledge of medicine, grasp at each new drug which is placed before them with exaggerated claims that it is rejuvenating and strengthening. Every physician of experience meets almost daily with patients who are in a condition of profound nervous and systemic disorder following upon nervous exhaustion which has been aggravated by the use of such nerve-stimulants as kola or caffeine—persons who are deceived, by the very fleeting relief of distressing symptoms, into the belief that a cure of their ailments is obtained, but in reality resort more and more frequently to the stimulant, as the drunkard does to his dram, and with every dose only bury themselves deeper in the slough of nervous collapse. Under such circumstances the medical profession has a double duty to perform, namely, to discourage by every means in its power the general employment of these preparations—by letting the laity know of the dangers which lie in the directions given by unscrupulous persons for their use, and by carefully avoiding the ordering or use of all preparations marketed by commercial houses which with the right hand issue circulars to the profession extolling their ethical and scientific labors, and with the left supply the laity with drugs, without physicians' orders, which are qualified to cause harmful results.—*Therapeutic Gazette*, June, 1896.

MEDICINE AND PATHOLOGY.

By ALBERT ABRAMS, M.D., Professor of Pathology, Cooper Medical College, San Francisco.

Disseminated Sclerosis.—OPPENHEIM directs attention to the action of intoxicants in the etiology of this affection. In 28 out of 36 cases, he found that in 11 of the 28 cases a history of exposure to the action of lead, zinc, copper, etc., was given. He regards intoxication as the chief cause of disseminated sclerosis. He does not negative other etiological factors. Some of the cases have been known to follow the infective diseases, and trauma also plays a role in the etiology. Some of the manifestations of the disease may begin at childhood, and therefore congenital causes may be present. He relates the case of a painter who showed signs of disseminated sclerosis. This individual suffered repeatedly from lead poisoning. After death, he was found to have a combined system disease of the spinal cord. Oppenheim attributes the relapses in disseminated sclerosis to definite causes, such as over-exertion, trauma, exposure to cold, pregnancy, etc.—*Berlin klin. Woch.*, March 2, 1896.

The Application of the New Photography in Medicine.—SIDNEY ROWLAND, in an extensive contribution to this subject, shows the successful application of this method in many cases. Its application in surgery is instanced in numerous observations which he cites. The possibility of skiagraphing the deep visceral regions of the body, is well exemplified in a full-sized skiagraph of the skeleton of an infant which accompanies his article. In this photograph, some of the soft organs are indicated. Thus the heart and lungs are distinctly silhouetted, and curiously enough the coils of intestine; a clear space above them is evidently that occupied by the stomach. He cites the case of a child who swallowed a half-penny in November last; since that time she has had constant symptoms pointing to the retention of the coin. The skiagraph showed the half-penny lying on the right iliac bone; it had evidently lodged at the ileo-cecal valve.—*British Medical Journal*, March 28, 1896.

MENTAL DISEASES AND MEDICAL JURISPRUDENCE.

By A. W. Hoisholt, M.D., Assistant Physician, State Asylum for Insane,
Stockton, Cal.

Severe Maniacal Excitement Following the Administration of Sodium Salicylate.—Dr. G. B. Robinson reports that a single woman, 40 years old, who had been an inmate of an asylum for 18 months, suffering from delusional insanity, received six 20-grain doses of this drug, at 4 hour intervals, to relieve a subacute rheumatism, which was principally located in her wrist-joints. She became restless, incoherently talkative, more excited and delirious, using disgusting and immoral expressions, and requiring the constant attention of two nurses. Recovery from these symptoms, after the use of whisky, milk, and eggs, took place within 36 hours.—*Jour. Mental Science—American Journal of Medical Science.*

A Case of General Paralysis Combined with Progressive Muscular Atrophy.—This case, which is reported by Dr. Schuster, is of great clinical interest, there being very few on record in which these diseases were combined. The principal symptoms consisted of dementia with grandiose ideas, Argyle-Robertson pupil, hypalgesia of the lower extremities, and a high degree of muscular atrophy. The muscular atrophy developed several years before the paralytic symptoms showed themselves. The question which is difficult to decide in the case, is whether the association of the paresis and the muscular atrophy is a coincidence, or whether the two diseases have a common etiology. The interval of eight years between the beginning of the two series of symptoms does not speak favorably for the latter idea.—*Neurologisches Centralbl.—Centralbl. f. innere Med.*, March 7, 1896.

Concerning Vertigo.—Prof. Mendel, of Berlin, defines vertigo as a complex of symptoms, which consists principally of a disturbance of the equipoise of the body, brought about by a pathological change in the function of the muscular apparatus of the eye-ball. When this in itself is not diseased the origin of the vertigo may be looked for in a temporary change of circulation in the region of the nuclei of the eye muscles. Prof. Mendel differentiates between four degrees of the vertigo: (1.) The mildest degree consists of the sensation of the sudden change in the external world, the result of a projection outwards of the perceptions connected with the changed condition of the eye-muscles. (2.) Following this sensation there is a feeling of disturbance of the equipoise of the body. (3.) The third degree has, in addition to the above, a marked tottering. (4.) The third degree attended by the other symptoms, as pain in the back of the head, noise in the ears, vomiting, excessive perspiration and retardation of the pulse-rate.—*Berliner klin. Wochenschr.—Centralbl. f. innere Medicin.*

FORMULÆ.

By H. E. Sanderson, Ph.B., M.D., Assistant Physician State Asylum for Insane, Stockton, Cal.

Hemorrhoids.—Dr. J. D. Peters uses:

Bismuth subnitrate.
Oleum ricini—equal parts.

S.—Apply well into the rectum.—*Chicago Medical Times.*

Malarial Chills:

Liquor potassii arsenitis.
Tinct. iodi—equal parts.

S.—Ten drops in water or milk three times a day.—*New York Polyclinic.*

Prevention of Bed Sores.—Apply the following mixture to the reddened area:

Chloral hydrate	1 drachm
Vaseline	1 ounce

—*New York State Medical Reporter.*

Solvent for Sordes.—Dr. MacGregor recommends:

Acid boric	gr. xxx
Potassii chlorat	gr. xx
Succi limonis	ʒv
Glycerini	℥iii

—*British Medical Journal.*

PUBLIC HEALTH.

By W. R. Cluness, M.A., M.D., San Francisco, Cal.

Mortality for June, 1896.—The deaths registered in 57 town districts of the State, during the month of June, in a population of 734,314, correspond to an annual rate of 15.24 a thousand, the total mortality having been 937. 64 deaths were due to zymotic diseases, giving an annual rate of 1.04 a thousand. Of these, 2 were due to diphtheria, 14 to cholera infantum, 20 to typhoid fever, 6 to diarrhea and dysentery, 6 to cerebro-spinal fever, 5 to whooping cough, 5 to croup, 1 to intermittent and remittent fevers, 3 to scarlet fever, 2 to measles, and 0 to small-pox. 246 deaths resulted from diseases of the respiratory organs, giving an annual rate of 4.08 a thousand. Of these, 135 were due to consumption, 79 to pneumonia, 26 to bronchitis, and 7 to pulmonary congestion; the rate being, for consumption and pneumonia, 2.16 and 1.20, respectively. 95 deaths resulted from diseases of the heart, 8 from alcoholism, 4 from erysipelas, 39 from cancer, and 412 from causes not given. The average annual death rate from all causes occurring in the ten largest cities and towns in the State, and representing a population of 610,000, was 15.84. The highest rate for the month occurring in cities having a population of 10,000 or more inhabitants, was reported from San Francisco, the lowest from San Diego.

METEOROLOGY.

Summary for June, 1896—*Temperature.*—The normal temperature of the State for June is 70.8°; the average for June, 1896, was 72.5°, a departure from the normal of +1.7°. The highest monthly mean was 106.1°, at Volcano Springs; the lowest, 52°, at Point Lobos. The maximum temperature was 130°, at Volcano Springs, on the 12th. The minimum, 21°, at Bodie, on the 11th. The absolute range for the State was 109°. The greatest monthly range was 69°, at Julian; the least, 18°, at San Francisco.

Rainfall.—The normal precipitation for the State for June is 0.31 inches; the average for June, 1896, was 0.03 inches, a departure from the normal of −0.28 inches. The greatest monthly precipitation was 1.10 inches, at Daunt; the least, nothing, at numerous places throughout the State.

Wind.—The prevailing direction of wind was W.S.W.

Unusual Features.—The unusual meterological phenomena of the month was the extreme heat in Southern California and the small amount of rain throughout the State.—James A. Barwick, Director California Weather Service.

California—Tabular Statement for June, 1896.

STATIONS.	TEMPERATURE.						RAINFALL.		Mean Relative Humidity	WEATHER.			WIND.	FURNISHED BY—
	Mean	Highest	Lowest	Mean Highest	Mean Lowest	Mean Daily Range	No of Days Rain Fell	Total Rainfall		No. of Clear Days	No. of Fair Days	No. of Cloudy Days	Prevailing Direction.	
Auburn .... Cal.	----	----	----	----	----	----	----	----	----	----	----	----	----	Southern Pacific Company.
Berkeley .... "	62.0	82	46	72	52	20	0	0.00	82	17	9	4	S.	Obs. University of California.
Colfax .... "	78.0	98	50	----	----	----	0	0.00	----	----	----	----	S.W.	Southern Pacific Company.
Coronado .... "	----	----	----	----	----	----	----	----	----	----	----	----	----	Hotel del Coronado.
Eureka .... "	54.0	64	44	60	48	12	5	0.51	84	10	18	2	N.W.	Weather Bureau Dept. Agr.
Fresno .... "	79.0	106	47	95	62	33	0	0.00	38	27	3	0	N.W.	" " "
Keeler .... "	82.0	112	60	----	----	----	1	T.	----	----	----	----	S.W.	" " "
Los Angeles .... "	69.0	99	48	80	58	22	2	T.	73	9	21	0	W.	" " "
Monterey .... "	60.0	78	50	----	----	----	0	0.00	----	----	----	----	W.	Southern Pacific Company.
Napa .... "	66.0	101	42	82	50	32	0	0.00	69	26	4	0	S.W.	Station Napa Insane Asylum.
Oakland .... "	60.0	83	46	71	52	19	0	0.00	75	20	10	0	N.W.	Chabot Observatory.
Paso Robles .... "	68.0	102	40	87	50	37	1	T.	----	25	4	1	N.W.	Agr. Experimental Station.
Red Bluff .... "	77.0	102	50	91	64	27	2	T.	35	25	3	2	N.W.	Weather Bureau Dept. Agr.
Sacramento. .... "	72.0	99	46	85	58	27	0	0.00	58	21	8	1	S.W.	" " "
San Bernardino "	73.0	107	48	93	54	39	0	0.00	----	25	5	0	W.	A. K. Johnson, M. D
San Diego .... "	65.0	87	54	70	59	11	1	0.01	80	16	3	11	S.W.	Weather Bureau Dept. Agr.
San Francisco .. "	57.0	79	47	64	51	13	0	0.00	79	18	10	2	W.	" " "
Santa Barbara .. "	64.0	89	47	72	56	16	3	0.05	72	23	2	5	E.	Hugh D. Vail.
Santa Cruz ...... "	61.0	90	41	75	46	29	0	0.00	----	26	4	0	W.	W. R. Springer.
Yuma .... A. T.	89.0	117	63	106	72	34	0	0.00	34	30	0	0	S.W.	Weather Bureau Dept. Agr.

NOTE—The precipitation at Santa Barbara was produced from two or three heavy fogs. Blank (----) indicates data missing.

Occidental Medical Times.

COMMUNICATIONS are invited from all parts of the world. When necessary to elucidate the text, illustrations will be furnished without cost to the author.

SACRAMENTO: AUGUST, 1896.

THE AMERICAN PEDIATRIC SOCIETY'S INVESTIGATION OF ANTITOXIN.

The report of the American Pediatric Society's collective investigation into the use of antitoxin in the treatment of diphtheria in private practice, presented at the Montreal meeting, in May last, which has recently appeared in a number of the journals, has been published as a supplement to *Pediatrics* for July, placing it in a very handy form for reference. This report is undoubtedly a document of very great value to the profession. It represents, not the experience of authors abroad, in foreign countries, or in hospitals or special institutions, but exactly what the vast body of general practitioners require, the experience of these practising in the United States, under conditions more or less similar to those obtaining in the field of the individual reader. While it is impossible to present the report in its entirety, we regard it as of such value that we propose to briefly review its salient points.

The committee rightly "believed that a more trustworthy estimate of the value of the serum treatment might thus be obtained than by statistics taken from hospital practice." A circular letter was issued early in April of the present year, asking for information upon the following points: Age; previous condition; duration of the disease; when first injection was made; number of injections; extent of membrane—tonsils, nose, pharynx, and larynx; whether diagnosis was confirmed by culture; complications or sequelæ; result; remarks, including other treatment employed; preparation used and general impression of reporter. Six hundred and fifteen physicians reported 3,628 cases; of these, 244 cases were excluded. In these the disease had been confined to the tonsils, and the diagnosis not having been confirmed by culture, was open to question. The figures given are, therefore, made up from cases in which the diagnosis was confirmed by culture (embracing about two-thirds of the whole number), the others giving pretty clear evidence of diphtheria by having been contracted from undoubted cases, or by the membrane invading other parts—as the palate, pharynx, nose, or larynx. It was the general opinion of the reporters that the type of diphtheria during the past year had not differed materially from that seen in previous years. If there be any difference in the severity of the cases included in the reports, from those of average diphtheria, it is that they embrace a rather larger proportion of very bad cases than are usually brought together in statistics. In 1,397 cases, the tonsils and pharynx, tonsils and nose, pharynx and nose, or all three were affected. In 1,556 cases the larynx was affected either alone or with the tonsils, pharynx, and nose—one or all. In many instances the serum was resorted to only when the condition of the patient had become alarmingly worse under the ordinary methods of treatment. Again, many physicians being, as yet, in some dread of the unfavorable effects of the serum, have hesitated to use it in mild cases and have given it only in those, from the outset, of a severe type. The question of expense has also prevented its use in mild cases. The committee believes that these facts will more than outweigh the bias of any antitoxin enthusiasts, by including many mild cases which would have recovered under any treatment.

Only two reports embracing a series of over 100 cases were received. Most observers sent in from 5 to 20 cases; many reporting single cases, particularly single fatal ones. In addition to the material from private reports, the committee had been furnished by DR. H. M. BIGGS with reports from 942 cases treated in the tenements of New York. In 856 of these cases the injections were administered by the health authorities upon the request of the attending physician, and 86 others were treated by physicians receiving antitoxin from the Health Board. In the first group the diagnosis was confirmed by culture, also in all of the latter except 26 cases. In each of these there was excessive membranous deposits and laryngeal invasion; 485 cases, or more than 50 per cent. of these cases, were in bad condition at the time of injection, and in 38 per cent. the injections were made on or after the fourth day of the disease. DR. BIGGS also furnished a partial report upon 1,468 cases from Chicago. In that city it was the custom to send an inspector to every tenement house case reported, and to administer the serum unless refused by the parents. These cases were, therefore, treated much earlier and the results were correspondingly better than obtained in New York, although the serum used was the same in both cities, namely, that of the New York Health Board.

The report gives a grand total of 5,794 cases, with 713 deaths, or a mortality of 12.3 per cent., including every case returned; but the reports show that 218 cases were moribund at the time of injection or died within 24 hours of the first injection. Should these be excluded, there would remain 5,576 cases (in which the serum may be said to have had a chance), with a mortality of 8.8 per cent.

Of the 4,120 cases injected during the first three days there were 303 deaths—a mortality of 7.3 per cent. If from these are deducted the cases which were moribund at the time of injection, or which died within 24 hours, there are left 4,013 cases, with a mortality of 4.8 per cent. BEHRING's original claim, that if cases were injected on the first or second day the mortality would not be 5 per cent., is more than substantiated by these figures. After three days have passed the mortality rises rapidly, and does not differ materially from ordinary diphtheria statistics. These figures emphasize the statement that relatively little benefit is seen from antitoxin after three days. Striking improvement has, however, in some cases been seen even when the serum has been injected as late as the fifth or sixth day. The duration of the disease, therefore, is no contraindication to its use.

In the 8,384 cases reported the larynx was involved in 1,256 cases, or 37.5 per cent. In 691, or a little more than one-half the number, no operation was done, and in this group there were 128 deaths. In 48, laryngeal obstruction was responsible for the fatal issue, operation being refused by the parents, or no reason for its being neglected having been given. In the 80 remaining fatal cases the patients died of other complications. In the 563 cases, therefore, or 16.9 per cent. of the whole number, there was clinical evidence that the larynx was involved, and yet recovery took place without operation. In many of these cases the symptoms of stenosis were severe, and yet disappeared after injection without intubation.

In establishing the value of the serum, nothing has been so convincing as the ability of antitoxin, properly administered, to check the rapid spreading of membrane downward in the respiratory tract, as is attested by the observations of more than 350 physicians who have sent in reports. In the operative cases, the same remarkable effects of the antitoxin were noticeable. Operations were done in 565 cases, or in 16.7 per cent. of the entire number reported. Intubation was performed 533 times, with 138 deaths, or a mortality of 25.9 per cent. In the above are included 9 cases in which a secondary tracheotomy only was done, with 7 deaths. In 32 tracheotomy only was done, with 12 deaths, a mortality of 37.4 per cent. Of the 565 operative cases, 66 were either moribund at the time of operation, or died within 24 hours after injection. Should these be deducted, there remain 499 cases operated upon by intubation or tracheotomy, with 84 deaths, a mortality of 16.9 per cent. Of the 2,819 cases not operated upon, there were 312 deaths, a mortality of 11.3 per cent. Deducting the moribund cases, or those dying within 24 hours after injection, the total mortality in all non-operative cases was 9.12 per cent.

The kind of antitoxin used is given in the order of the frequency with which each has been employed. First, the serum prepared by the NEW YORK BOARD OF HEALTH; second, BEHRING'S; third, GIBIER'S; fourth, MULFORD'S; fifth, ARONSON'S; sixth, ROUX'S. In addition a large number of cases are reported as having been treated by the serum prepared by the Health Boards of different cities—Brooklyn, Newark, Rochester, Pittsburgh, etc. In the great majority of cases but one injection is reported. In very severe ones two and three have been given. The largest amount is in a case by WEIMER (Chicago), who gave 18 injections of BEHRING'S serum to a laryngeal case in a child 13 years old. Another instance of 10 injections is reported with no unfavorable symptoms. As a rule the dosage has been smaller in antitoxin units than is now considered advisable, particularly in many of the laryngeal cases, and others injected later than the second day.

Under the head of cases in which unfavorable symptoms were, might have been, or were believed to have been, due to antitoxin injections, only three that could by any possibility be placed in this category were reported. All of the details furnished by the reporters are reproduced:

CASE I, by KORTRIGHT, Brooklyn: Sudden death in convulsions 10 minutes after injection. This case is the already well-known Valentine case, occurring in Brooklyn in the spring of 1895. The principal points were as follows: A girl 16 years old; in good condition; tonsillar diphtheria; diagnosis confirmed by culture; injected on the first day with 10 c.c. BEHRING'S serum; died in convulsions 10 minutes later. CASE II, by KERLEY, New York: Fairly healthy boy, 2½ years old; membrane on tonsils, pharynx, and in nose. Diagnosis confirmed by culture; injected on the morning of the fourth day with 10 c.c. (1,000 units), NEW YORK HEALTH BOARD serum; temperature at the time of injection 100.4° F.; no sepsis, and child apparently not very sick; urine free from albumin. Distinctly worse after injection; in 10 hours temperature rose to 103° F.; urine albuminous; throat cleared off rapidly, but marked prostration and great anemia, with irregular fluctuating temperature continued, and death from exhaustion with heart failure four days after the use of the serum. **CASE III**, by **EYNON**, New York: Male, 3½ years old; diagnosis confirmed by culture; two days ill; membrane on tonsils and in nose; two injections **NEW YORK HEALTH BOARD** serum. "A rapid nephritis developed after the second injection, causing coma, convulsions, and death 20 hours after the second injection." In response to an inquiry for further particulars the following was received: "The case seemed a mild one, but the injection was given one afternoon and repeated the following afternoon, about 1,500 units in all. The urine up to that time had not been examined. About 14 or 16 hours after the second injection unfavorable symptoms began to develop pointing to infection of the kidneys. The urine was found to be loaded with albumin. My impression at the time was that the antitoxin either produced, hastened, or intensified nephritis, thereby causing the fatal termination."

In regard to these cases the committee say: Case I is wholly unexplained. In Case II, the query arises, Did this sudden change hinge upon the injection of the serum, or was it one of those unexplained abrupt changes for the worse in a case apparently progressing favorably, so often observed in diphtheria? As regards Case III, it will be seen from the letter that the evidence is not at all conclusive. All details available are given, and the reader may draw his own conclusions.

The following is the summary of the committee of the whole series reported: (1) The report includes returns from 615 physicians. Of this number more than 600 have pronounced themselves as strongly in favor of the serum treatment, the great majority being enthusiastic in its advocacy. (2) The cases included have been drawn from localities widely separated from each other, so that any peculiarity of local conditions to which might be ascribed the favorable reports must be excluded. (3) The report includes the record of every case returned except those in which the evidence of diphtheria was clearly questionable. Doubtful cases which recovered have been excluded, while doubtful cases which were fatal have been included. (4) No new cases of sudden death immediately after injection have been returned. (5) The number of cases injected reasonably early in which the serum appeared not to influence the progress of the disease was but 19, these being made up of 9 cases of somewhat doubtful diagnosis; 4 cases of diphtheria complicating measles, and 3 malignant cases in which the progress was so rapid that the cases had passed beyond any reasonable prospect of recovery before the serum was used. In two of these the serum was of uncertain strength and of doubtful value. (6) The number of cases in which the patients appeared to have been made worse by serum was 3, and among these there is only one new case in which the result may fairly be attributed to the injection. (7) The general mortality in the 5,794 cases reported was 12.3 per cent.; excluding the cases moribund at the time of injection, or dying within 24 hours, it was 8.8 per cent. (8) The most striking improvement was seen in the cases injected during the first three days. Of 4,120 such cases the mortality was 7.3 per cent.; excluding cases moribund at the time of injection, or dying within 24 hours, it was 4.8 per cent. (9) The mortality of 1,448 cases injected on or after the fourth day was 27 per cent. (10) The most convincing argument, and to the minds of the committee an absolutely unanswerable one, in favor of serum therapy is found in the results obtained in the 1,256 laryngeal cases (membranous croup). In one-half of these recovery took place without operation, in a large proportion of which the symptoms of stenosis were severe. Of the 533 cases in which intubation was performed the mortality was 25.9 per cent., or less than half as great as has ever been reported by any other method of treatment. (11) The proportion of cases of broncho-pneumonia—5.9 per cent.—is very small, and in striking contrast to results published from hospital sources. (12) As against the two or three instances in which the serum is believed to have acted unfavorably upon the heart might be cited a large number in which there was a distinct improvement in the heart's action after the serum was injected. (13) There is very little, if any, evidence to show that nephritis was caused in any case by the injection of serum. The number of cases of genuine nephritis is remarkably small, the deaths from that source numbering but 15. (14) The effect of the serum on the nervous system is less marked than upon any other part of the body; paralytic sequelæ being recorded in 9.7 per cent. of the cases, the reports going to show that the protection afforded by the serum is not great unless injections are made very early.

The Society voted to accept the report of the committee, and, after a full discussion, it was decided to embody its conclusions in the following resolutions: (1) *Dosage.* For a child over 2 years old, the dosage of antitoxin should be in all laryngeal cases with stenosis, and in all other severe cases, 1,500 to 2,000 units for the first injection, to be repeated in from 18 to 24 hours if there is no improvement; a third dose after a similar interval if necessary. For severe cases in children under 2 years, and for mild cases over that age, the initial dose should be 1,000 units, to be repeated as above if necessary; a second dose is not usually required. The dosage should always be estimated in antitoxin units and not of the amount of serum. (2) *Quality of Antitoxin.* The most concentrated strength of an absolutely reliable preparation. (3) *Time of Administration.* Antitoxin should be administered as early as possible on a clinical diagnosis, not waiting for a bacteriological culture. However late the first observation is made, an injection should be given unless the progress of the case is favorable and satisfactory. The committee was appointed to continue its work for another year, and was requested to issue another circular asking for the further coöperation of the profession; this circular to be sent out as soon as possible, in order that physicians may record their cases as they occur through the coming year.

THE REDUCTION IN THE FEES OF MEDICAL EXAMINERS FOR LIFE INSURANCE.

The discussion of this question which has been carried on in these pages is no doubt fresh in the minds of our readers. The movement initiated in this city by the Sacramento Society for Medical Improvement, that was subsequently taken up by nearly every medical organization on the Pacific coast, has at last borne fruit. We have much pleasure in publishing the following extract from a circular to medical examiners, dated June 16, 1896, that has been issued by the Equitable Life Assurance Society: "Please take notice that for medical examinations for new insurance in this Society made in the United States, Canadian Provinces, and Newfoundland, on and after July 1st, 1896, compensation will be by the uniform fee of $5 for each case of a complete examination report and opinion of the risk, rendered according to the Society's standard blank form for a medical examination report. The cost of an examination for the restoration of a lapsed policy is to be borne by the subject and not by the Society. The fee in such case is accordingly a matter of private arrangement between the examiner and the examinee."

This recognition of the rights of the profession, by the Equitable, while a trifle tardy, should, nevertheless, be accorded every credit. It is incomprehensible to any professional man why the suicidal policy of a graded scale of professional fees, for precisely similar work, should have ever been formulated by one of the most progressive insurance companies of this country and one that has always aimed at the highest standard of medical examinations. We regret to learn that the Equitable's former partner, or rather the company that lured it from the paths of honorable conduct toward the profession—the New York Life—still persists in its iniquity. We understand that a prominent official of that company "fervently wishes it would recede from its present policy, and that right speedily." It is hardly possible that the New York Life will attempt to maintain this altogether indefensible position alone, especially as it has been quite busy of late years in defending attacks from various quarters. It is equally improbable that any prominent life insurance company can now be induced to follow it in the course it has so unfortunately pursued. It will now be in order for every medical organization to make a special effort on behalf of the New York Life.

The restoration of the old standard fee by the Equitable may be taken as a "collective investigation report" on this question, and as a verdict, the justice and business wisdom of which, is unimpeachable. When we first undertook this movement in California there were some who predicted failure, and others who deprecated any action of a hostile nature as likely to injure the regular profession—probably in the interests of the advocates of a quiescent policy. We had but one doubt on the question of a successful issue—the possibility of united action by the profession. It was soon evident that, for once, the profession was tolerably unanimous, and that if the insurance companies were honest in their endeavors to procure the best material available for their medical staffs, it was only a question of time when the old fees would be restored. In the fight on behalf of the profession, many good men who had served the recalcitrant companies honestly and faithfully for many years, resigned their commissions, while others, with less honesty but more policy, endeavored to hold their ground by various ways, less, or more devious. The places of the old examiners have been filled, and it is unlikely that they will be again employed. We trust that, in this matter, there will be no repining. A fight made for principle and honestly won is a complete victory, and he who fights for principle rather than for material gain, should not enter the battle unless he has fully counted the cost both of defeat and of victory.

NOTES.

American Association of Obstetricians and Gynecologists.

The ninth annual meeting of the American Association of Obstetricians and Gynecologists will be held at the Hotel Jefferson, Richmond, Va., Tuesday, Wednesday, and Thursday, September 22, 23, and 24, 1896. The proprietors of the "Jefferson" offer special rates to the Fellows of the Association, their families and guests, as well as to any physicians who come to attend the meeting. It is confidently expected that the railways will offer transportation at a uniform rate of a fare and a third, on the certificate plan, to all in attendance. Let all obtain certificates from their local ticket agents, or from the nearest point where certificates are granted.

The American Electro-Therapeutic Association.

The sixth annual meeting of the American Electro-Therapeutic Association will be held on Tuesday and Wednesday, September 29 and 30, and Thursday, October 1, 1896, in Allston Hall, the Studio Building, on Clarendon street, near St. James avenue, Boston, Mass. The Brunswick Hotel, corner Boylston and Clarendon streets, will be the headquarters of the Association during the meeting. Terms reduced to four dollars per day, for Fellows and their friends. The Copley Square Hotel, corner Exeter street and Huntington avenue, terms reduced to three dollars per day, is also located in close proximity. For rooms, etc., apply either to the proprietors, or to Dr. W. H. White, No. 222 Marlborough street, Boston, Mass., who, as Vice-Chairman of the Committee of Arrangements, will reserve rooms. Prof. A. E. Dolbear, Tufts' College, Mass., is Chairman of the Committee of Arrangements. Dr. Emil Heuel is the Association Secretary.

Nevada State Medical Society.

The semi-annual meeting of the Nevada State Medical Society was held at Reno, July 13th, and was, in every respect, a success. The Society appointed a committee of one from every county to report to the Secretary a complete list of the names of all practising physicians in each county, together with the names of all such physicians who have complied with the law by filing in the office of the County Recorder a copy of their diploma or certificate of graduation. Upon the receipt of such lists the Secretary of the Society is directed to communicate with the District Attorney of any county in which a practising physician has not recorded his diploma, furnishing that official with the names of such physicians, and requesting that the Act preventing the practice of medicine by unauthorized persons be strictly enforced. This Act was passed as far back as 1875, but does not appear to have been operative. The Society, during the morning, was entertained by Dr. H. Bergstein, Superintendent of the State Hospital for Mental Diseases, who delivered an interesting address on insanity, with clinical illustrations. During the afternoon the Society met at the State University, where a number of papers were read and discussed. Prof. N. E. Wilson delivered a lecture on the X-rays, with practical demonstrations. During the evening a banquet was tendered the visitors at the Arcade Restaurant, which was a very enjoyable affair.

The San Francisco Pest house Site.

The agitation for the removal of the San Francisco Pest-house from its present site has not subsided. The Supervisors, urged on by clamoring property owners and continually reminded of the wretched condition of the present buildings, have been hunting high and low for a location acceptable to their constituents. They have found no place free from the objections of residents, but the location having the least numerous opponents is on the Alms-house tract, for nearly all the land in the neighborhood belongs to one man—Mayor Sutro. The latter is doing all that he can with his official powers to prevent the selection of this site. His objections are that the proposed site is in the westerly part of the city, which is fast becoming a residence quarter, and consequently that it would be only temporary; that the summer winds blow over this location toward the heart of the city, and that it is rather difficult of access. The Mayor believes that the best location would be somewhere on the east shore of the peninsula. This seems to be the opinion of all disinterested parties. Ignoring the objections of property owners, the advantages of the east or bay shore are obvious. It is furthest away from the residence quarters; the direction of the wind during the greater part of the year is from the shore toward the bay, and the proximity of salt water would in several ways be of sanitary value. The matter of deciding on a site has been postponed for a time at the special request of the Mayor, and it is to be hoped that the east shore will be finally selected.

SOCIETY PROCEEDINGS.

SACRAMENTO SOCIETY FOR MEDICAL IMPROVEMENT.

Regular Meeting, May 19, 1896.

The President, F. B. Sutliff, M.D., in the Chair.

Amendment to Constitution.—The amendment to Article II, of the Constitution, submitted by Dr. Thos. Ross, was taken up for consideration and unanimously adopted. The amendment provides that hereafter three negative votes shall be necessary for rejection. Heretofore one black ball has excluded.

Dr. H. D'Arcy Power read a paper entitled "Physical Diagnosis." [To be published.]

Dr. F. Gundrum: While Dr. Power may not have said anything new, I think he has done well to call our attention to this subject. I saw, about six months ago, a pleximeter of rubber which was a very good instrument, and I have made one like it. I just took a piece of rubber eraser and sliced it in two, so that it would get around the prominences of the chest and be pressed into the hollow spaces and give a natural sound.

Dr. J. H. Parkinson: Dr. Power's paper is an interesting one in many respects, and a subject that is useful to us all. I think the pleas that Dr. Power makes will not be altogether successful, as men who are very busy in general practice, will, often, not take the time for minute diagnosis except in difficult cases, while those of less severity are not diagnosed until later on. As regards the microscope, from my observation and experience, I think the points brought out by the Doctor are very good. There are a number of men who own microscopes and who know nothing about the instrument. Numbers of men are making examinations whom I feel are incompetent to do so. I fully agree with the author that it is far better to perfect that which is always available, than to seek after things which are more difficult to attain. I also agree with him when he says that it takes a long time to become proficient in microscopical and bacteriological work. The question of examining the chest and stripping the patient is one of the most glaring faults on the part of all of us. There are a great many men who do not examine as they ought to, and who do not remove the clothing, because getting the patient to undress is often a difficult matter in private practice. To make concessions to the feelings of a patient in regard to exposing the chest is certainly a mistake on the part of any of us. In our efforts to make an exact diagnosis it seems to me we sometimes lose sight of clinical observation, and of that clinical acumen, and that attention to such details as the tongue and pulse, that had been attained years ago. Certainly such men as Stokes, Graves and Hudson, with whom I am more expecially familiar, and who have made diagnoses without any of our modern instruments or methods, attained excellent results. In regard to the testing and examination of the urine, there are certainly methods that are accurate and within the reach of all of us, and others more difficult to attain and less practicable.

Dr. Thos. Ross: The reader of the paper has succeeded in presenting a very interesting and valuable article. I think it is one that cannot help but have a good effect, as it shows the necessity of our being more accurate in examinations about the chest.

Dr. H. L. Nichols: The standard the author has set up for us, in regard to physical diagnosis, is a high one—one that we might all strive to attain, but at the same time not, perhaps, within the reach of all of us.

Dr. W. A. Briggs: I think the author has done very wisely in calling our attention to these important matters. I have, in various ways, been disappointed in special methods of diagnosis. Recently I have made a clinical diagnosis of cancer in two different cases, in both of which the history verified the diagnosis. One was a case of carcinoma of the uterus in which removal would have offered a certain chance of success; it was one of the best cases I ever saw for operative procedure. In dilating the uterus with the finger I saw I had a case of carcinoma. There was, however, no unpleasant odor, simply continued hemorrhage. The parts were curetted. From the specimen submitted for microscopical examination the result was negative, and on this diagnosis I curetted again and lost the patient. In a case which I had diagnosed as fibroma, but which, from the history of the case (previous watery discharge), made me inclined to believe might be sarcoma; I submitted some of the pus to Dr. Power and he made a diagnosis of fibroma. That diagnosis was confirmed later on; it was a sloughing fibroma. It seems to me, under such conditions, we must be on our guard in making examinations, both clinical and microscopical. In what the Doctor says of the cardiac respiratory murmur I fully concur. It has occurred to me that we might make physical examinations, particularly of the chest, in a more scientific manner than we do. I think there is a deficiency in my own ear so that I do not recognize certain shades of pitch, and I think I make errors in physical diagnosis by this defect. It seems to me that we might make an absolute register of the condition we find by absolutely identifying the pitch of the note which we get. For instance, we have a note at a particular point, under certain conditions, and we make a register of it, on the musical scale, and so have a sound not only recognized by the examiner but by anybody capable to make such diagnosis. In that case one very skillful in physical diagnosis could watch the progress of a case of phthisis with great exactness. I know of young men very accurate in their appreciation of pitch. They will take any note, and, going to a piano, reproduce it within a note or two. It seems to me that such an ear could make a diagnosis, and register it, and in that way follow a case very closely.

Dr. Power: The use of the microscope in detecting malignant disease is a very nice thing. You will recollect that difficulty arose in the case of the late Emperor of Germany. Mackenzie removed a clipping from the growth, which was examined by Virchow and stated to be non-malignant. The fact is, it is a very difficult thing to get sufficient from a growth to base anything at all upon it. In regard to the slip referred to by Dr. Briggs, I think I said I was not prepared to agree with that statement. I think you can generally palpate a kidney; you cannot when it is displaced.

Dr. L. A. Harcourt: I met a man who was in Berlin when the Emperor died, and a German physician stated that the sample offered by Mackenzie was taken from the sound side of the throat—that is, he was accused of having taken tisue from the sound side of the throat and sending it to be examined.

SAN FRANCISCO COUNTY MEDICAL SOCIETY.

Regular Meeting, June 9, 1896.

The President, **Wm. Fitch Cheney**, M.D., in the Chair.

New Members.—J. C. **Stimson**, M.D., and F. **Fehleisen**, M.D., were duly elected members of the Society.

Dr. T. B. DeWitt read a paper entitled "Report of a Case of Leucocythemia."

Dr. A. Abrams: There are certain things about this case that make it interesting. There was an excessive inflammation of the lymph glands, the palate and the gums were affected, and the face distorted. As to the blood examination, there was an increase of white cells such as is seldom met with, they almost equalling the red. In about 15 cases that I have ever seen, in the worst, the proportion was about 1 to 100. The spleen was greatly enlarged, equalling any I have ever seen, except that in the Museum of Cooper Medical College, which weighs 19 pounds.

Dr. C. G. Kuhlman: I should like to ask Dr. DeWitt how long before death did these cerebral symptoms come on?

Dr. DeWitt: About 24 hours.

Dr. Kuhlman: Then I object to calling that a typical case of leucocythemia. When Hughes Bennett introduced the word leucocythemia, meaning "white cell blood," he and Virchow regarded all cases in which the percentage of white corpuscles was five or six to one of red, as being typical, but when higher than that as not so. I cannot, therefore, believe that Dr. Abrams is correct. The examination of the blood was made *post-mortem*, when the red corpuscles undergo a change, so that sometimes they cannot be distinguished from the white. As to the cerebral symptoms, they generally appear from two to three months prior to death. I therefore do not consider that these symptoms warrant us in regarding this case as typical leucocythemia, but rather as one of splenic or pernicious anemia.

Dr. DeWitt: I think all authors would bear out the diagnosis. The enlarged spleen and the increase in the number of white corpuscles, as shown microscopically, are typical.

Hemi-Facial Atrophy.—**Dr. A. Abrams** exhibited a case of what he believed the beginning of hemi-facial atrophy, the result of a constant habit on the part of the patient of rubbing the left malar bone. Electrical examination seemed to bear out this theory. Such cases are quite rare, only 40 being mentioned in literature.

Dr. Leo Newmark: I have under my care at present a patient with an intense neuralgia of the fifth nerve, and an atrophy of the side so affected. The atrophy, however, was primary, having begun 30 years ago. For some some past it has remained at a standstill.

Dr. J. J. McCone read a paper on "Congenital Malformation of the Rectum, with a Report of an Exceptional Case."

Dr. H. M. Sherman inquired whether, if the tumor had been felt in the left iliac fossa, the same incision would have been made. The *technique* was exceedingly good.

Dr. C. G. Kuhlman: As a rule, in these cases, the bowels are so distended with gas that the location of a tumor, or the outlining of any organ, is difficult, if not impossible.

Dr. G. F. Shiels: The central incision, irrespective of any distension or tumor, is the best one to use, even if we have to search for the blind end it would be better than to use the lateral incision.

Dr. J. Wagner: Some years ago two cases of this kind fell into my hands in one week; they were both eight months' babies. I was always on the lookout for such cases, and have examined every child, then as now, with the exception of these two. The nurse gave, or attempted to give, an enema, but said that it came right back. On examination the closed intestine was found. Dr. R. A. McLean was consulted, but declined to operate, as the child was moribund. Three days after this I confined a girl 17 or 18 years of age, and several days afterwards my attention was called to her baby's condition, which I found to be similar to that of the preceding cases. Without any assistance I made a perineal incision, and a long way up found the bowel, which, however, I could not draw down to the anus. The infant was exceedingly feeble, and died within a few hours.

Dr. F. B. Carpenter inquired if it would not be possible to do a post-peritoneal operation rather than a laparotomy. Of course the danger from infection in a median incision is not very great.

Dr. A. P. Woodward believed the depression to the subject by not using an anesthetic would be quite as great as if one were used.

Dr. McCone, in replying, said: As regards the incision, various authorities speak of either the right or left lateral, and no mention is made of the median incision, which has been commended by Dr. Shiels and others. The use of an anesthetic would not have made much difference. The child did not seem to be in pain, and did not struggle at all. The cut was about the size of the thumb, perhaps larger. It was difficult to distinguish between the large and small intestine, and it was only by tracing them that the difference could be made out.

A Wooden Corset.—**Dr. E. G. Frisbie** exhibited a wooden corset, with a sample of the wood from which it was made, and a brace for flat-foot. In making the corset, a plaster cast of the patient was first taken and on this the wood was placed in thin strips not unlike bandages, and secured to a linen frame or foundation, by means of glue.

Dr. H. M. Sherman: The only question is, how would this suit the glorious climate of California. Others than Phelps, of New York, say that it is too hot there for this material. I am more interested in making a celluloid corset which would be an ideal one. I made one, but it has drawbacks; it costs too much, and then, as celluloid sets so quickly, it cannot easily be moulded to the deformed figure. The celluloid I had was of a poor quality, so I intend to try again, Naylor, of Rochester, makes a corset of matrix paper, glued and afterward enamelled and baked. It is light, dry, clean, and would be as good as celluloid only it is not so easy to make. The foot-brace exhibited is only the old style common foot-brace used to educate the muscles to overcome flat-foot. The term "arch of the foot" is really a misnomer. Mechanically, it is a truss.

Dr. Campbell Ford read a paper entitled "Operation for Ovarian Fibroid, Closure of Abdominal Wound with the Author's Continuous Interrupted Suture." The method of suturing was demonstrated to the Society. The stitch is taken as follows: Pass the needle through the structures to be united, and, without cutting, tie a reef knot. With the second stitch pass the needle from right to left, thrusting the point well through. Before grasping the point to draw it through, pick up the thread near the former knot and turn from right to left around the point of the needle; once around for a reef knot and twice for a surgeon's knot, adjusting the tension. This forms the first loop of the knot. Pass the needle from left to right between the end of the strand between the two knots, drawing the needle and thread out through the loop formed. This completes the knot. The first may be modified by passing the needle around the thread instead of the thread around the needle. All the advantages of both the continuous and interrupted sutures are embodied in this stitch, with none of their disadvantages. By using the thread as a guy-line, the last stitch may be readily located and the next easily inserted. It can be introduced in one-sixth of the time required for the interrupted suture, and with a little practice may be inserted as fast as the simple continuous suture. Its advantages are as follows: It is absolutely clean, the first loop does not slip, no material is wasted, no assistance is required; there are no tangled ends of sutures, changing and threading of needles, or cut ends to irritate, as in the interrupted suture. The circulation is not interfered with, the knots cannot untie, and each stitch may be removed separately. The force exerted is just sufficient to close the wound, and it operates to the best advantage, that is, at right angles to the incision. For uniting the different planes when closing the abdomen, and wherever perfect union is required, as in Stinson's, Bassini's, and other operations for the radical cure of hernia, this stitch seems to be particularly adapted to supplant the inefficient Glover's, the slowly introduced interrupted suture, with its numerous points of irritation, the crude cobbler's stitch of Marcy, or the wire or Halstead, and in fact any other stitch yet devised.

Dr. Dudley Tait: Fibroid of the ovary is rare, and before admitting this to be one, a specimen should be examined microscopically. Regarding the author's stitch, all sutures should respond to the following indications: Simplicity, expediency, asepsis, security. In this stitch only one indication is met —security; it has none of the others. It is neither rapid nor simple. I have lately seen it used, and it requires three times as long to insert as the old suture. It is not as clean, as it is handled much more. In the case in which I saw it used it was an absolute failure.

Dr. J. H. Barbat: The only place where I see it could be used advantageously, is in sewing the peritoneum, or in fascia, where the continuous suture would be employed. It cannot be made with silkworm gut.

Dr. G. F. Shiels: I would repeat what Dr. Barbat says. Sutures are only splints, and the advantage of an interrupted suture is, that the edges can be readily adopted. What advantage this "chain-gang" of sutures can have I do not see.

Dr. C. E. Farnum: In closing wounds of the intestine and peritoneum the tissues are so delicate that this stitch might tear out, which does not happen in the interrupted suture.

Dr. Ford, in replying, said: In the case mentioned by Dr. Tait, where this stitch was a failure, the suture was put in by one who had never used it before, and Dr. Tait knows that outside influence did the work in this case. As to the rapidity, I can put in six of my own to one interrupted suture. There is very little danger of infection, as only one person handles the needle; the silk and needle holder has nothing to do with it. In soft and deep structures it is not necessary to pass beneath the thread after the reef knot. The tension is in the right direction; the stitches can be cut between and are then simple interrupted sutures. They cannot slip; when it is being applied you have absolute control over both ends. If the knot is tied too tightly, or if you wish to loosen it, simply pull it loose. Dr. Stinson, in applying it the first time, did it much quicker than with the interrupted suture, and he is now using no other.

SPECIAL CORRESPONDENCE.

EDINBURGH.

The Superiority of American and Canadian Hospitals.—The Presbyterian Hospital, New York.—The Older and the Rising Generation in the Profession,—Osteomalacia.

Since leaving California subject matter of professional interest has been so abundant and so various, that one is puzzled to know what to write and what to leave unwritten. After wasting considerable gray matter over that difficulty, a compromise occurred to me in a happy moment, and instead of wearying you with an exhaustion of one idea, or on the other hand attempting to speak of everything that attracted my attention, my efforts shall be toward a simple noting of what has seemed important or interesting in any department.

In looking back over some months, passed in touch with our best American and Canadian hospitals in the east, and comparing that experience with what I have around me at present in this justly famous seat of learning, I cannot help feeling proud of our men and our institutions. For while perfectly willing to admit the eminence of the great men who have been, and are, identified with this great university, it is none the less true that our hospitals are immeasurably superior, and the men in the van of American medicine and surgery are second to none, to put it very dispassionately. Perhaps my experience with London and continental hospitals and their staffs, may modify or quite reverse this conclusion, but from all I can gather it is very improbable.

In New York there are a number of hospitals splendidly equipped, but of these the Presbyterian Hospital comes easily first in my mind. In that extensive and essentially modern institution, every conceivable dream of an up-todate surgeon or physician seems realized. It is very fine indeed.

In the ranks of the profession, every possible courtesy and privilege was extended to me by every one. On becoming somewhat more closely acquainted with them, I found, besides the older men contemporary with such names as Thomas, Emmet, and Sayre, there is a new and strong generation growing into prominence, men like Cragin, Dana, Boldt, and Krug, as well as many others whose work I had the privilege of watching. Many of the older names are world-wide, and some of the younger men are quoted here, as well. Moreover, the largest medical book-seller here assures me that American works on gynecology, for example, are in active demand.

In my work here, Dr. Cathcart very kindly introduced me personally to Professors Simpson, Hart, and Barbour, thus giving me every facility for getting the cream of what was being done as well as what is under discussion. One of these discussions, of recent date, seemed of considerable importance from a practical standpoint. The subject was osteomalacia as affecting women, and I append this summary of treatment: (1) Internal treatment is warranted in cases of non-pregnant women, if the disease is not very far advanced. The successful means have been good hygiene and food, the internal administration of phosphorus and bone marrow, and the use of salt baths. And it is to be remembered that chloroform narcosis has resulted favorably in a few cases. (2) In the event of failure with these, or of great deformity, or in advanced cases, oöphorectomy should be resorted to promptly, all other means being continued, having in view toning up the system as above outlined. (3) When, in pregnancy, a viable child is impossible, on account of contraction of the pelvis, operation is inevitable, sooner or later. It is undecided whether abortion should be induced, and, at a later date, the ovaries removed; or whether, if the disease be not progressing rapidly, it would not be better to wait till term, then to operate, either by cesarian section and removal of the ovaries, or by a modified Porro. Velits advises cesarin section and removal of both ovaries. But several others, among them Neumann and Chrobak, advise the removal of ovaries and uterus. After operation, a striking feature is the rapid disappearance of pain, such as was elicited by pressure or movement. E. J. BOYES.

EDINBURGH, June 10, 1896.

REVIEWS AND NOTICES.

THE MULTUM IN PARVO REFERENCE AND DOSE BOOK. By C. Henri Leonard, M.A., M.D., Professor of the Medical and Surgical Diseases of Women, Detroit College of Medicine. Detroit, 1896: The Illustrated Medical Journal Company, Publishers. Flexible Leather, 143 pages; price, 75 cents.

This is a recent edition of the Dose Book, of which the title page informs us some forty thousand copies have been issued. The present edition is printed on very thin paper, and is bound in red leather, round corners, so as to make it specially light and handy for the pocket; the weight is not two and a half ounces. Besides the doses of some 3,500 preparations being given, it has numerous tables, such as the solubility of chemicals, pronunciation of medical proper names, poisons and their antidotes, incompatibles, tests for urinary deposits, abbreviations, table of fees, etc. It will be found a handy pocket companion.

MEDICAL NEWS.

LICENTIATES OF THE BOARD OF EXAMINERS.

At a meeting of the Board of Examiners, held June 2, 1896, the following were granted certificates to practise medicine in this State:

J. H. McI. Clinch, Portland, Or.; Med. Dept. Univ. Oregon, April 1.'96,
Francis E. Corbin, Los Angeles; Detroit Med. Coll., Mich., June 29,'70.
Edward James Cowen, Fullerton; Trinity Coll., Dublin, Ire., M.B., Mar. 5,'78; Trinity Coll., Dublin, Ire , B.Ch. July 4,'78.
Benj. Hawk Ewing, San Francisco; Med Coll. of Ohio, April 9,'96.
G. V. Hale, Milpitas; Jefferson Med. Coll , Pa., April 2,'83.
H. Nelson Jackson, Burlington, Vt.; Med. Dept Univ. Vermont, July 17,'93.
P. S. Kellogg, Honolulu, H. I.; Detroit Med. Coll., Mich., May 3,'95.
Leander Y Ketcham, San Diego; Med. Dept. Univ. Vermont, July 1,'80.
Manuel Masforroll, San Francisco; Harvard Med. Coll., Mass., June 28,'76.
Caroline A. Hollister Millard, San Francisco; Med. Dept. Univ. Mich., Mar. 24,'75.
Herbert E. Pratt, National City; Chicago Med. Coll., Ill., Mar. 29,'87.
Ella Warren Sullivan, San Diego; Cincinnati Coll Med. and Surg., April 2,'96.
Masataro Tsumaki, San Francisco; Med. Examining Board, Tokio, Japan, May 1,'83.
Archibald Dunn Walker, Riverside; Queen's Univ., Canada, April 23, 88.
John Joseph Gallagher, San Francisco; Cooper Med. Coll., Cal., Dec. 5,'95.
Wm. H. Wentworth, San Francisco; Cooper Med. Coll., Cal., Dec. 5,'95.
Clifford Emmet Allen, Bangor; Med. Dept. Univ. Cal., May 13,'96.
Sanford Blum, San Francisco; Med. Dept. Univ. Cal., May 13.'96.
Leonard Hayes Coe, San Francisco; Med. Dept. Univ. Cal., May 13,'96.
Thomas Davis Maher, San Francisco; Med Dept Univ. Cal., May 13,'96.
Alfred McLaughlin, San Francisco; Med. Dept. Univ. Cal.. May 13,'96.
Brayton Muscott, San Francisco; Med. Dept. Univ. Cal., May 13,'96.
John T. O'Brien, San Francisco; Med. Dept. Univ. Cal., May 13,'96.
Wm. Henry Ingram O'Malley, San Francisco; Med. Dept. Univ Cal., May 13,'96.
M. Voorhees Stone, San Francisco; Med. Dept. Univ. Cal., May 13,'96.
Wm. M. Stover, San Francisco; Med. Dept. Univ. Cal., May 13,'96.
Lewis Sanborn Thorpe, Los Angeles; Med. Dept. Univ. Cal., May 13,'96.

REFUSED.

A. Rupin, San Diego; insufficient credentials.
J. C. Flemming, Trinvale College; not recognized.

The following certificates were granted July 8, 1896:

C. M. Armistead, San Francisco; Med. Dept. Univ. Cal., May 13,'96.
L. D. Bacigalupi. San Francisco; Med. Dept. Univ. Cal.. July 13,'95.
W. Webster Butterfield, Los Angeles; Bellevue Hosp. Med. Coll., N. Y., Mar. 1,'68.
W. D'Arcy Chace, Alameda; Med. Dept. Univ. Cal., May 13,'96.
Thos. Coolridge, St. Helena; Barns Med. Coll., Mo., Mar. 17,'96.
Rose Eppinger, San Francisco; Med. Dept. Univ. Cal., May 13.,'96.
Edwin J. Evans, San Francisco; Detroit Med. Coll., Mich., Apr. 30,'96.
Alfred Fellows, Los Angeles; Northwestern Univ.. Ill., June 11,'96.
J. A. Going, San Francisco; Soc. Apothocaries, London, Dec. 10,'84; Me. M. Royal Coll. Surg., England, Jan. 28,'87.
J. T. Harrigan, San Francisco; Med. Dept. Univ Cal., May 13,'96.
G. B. Hoagland, Berkeley, Jefferson Med. Coll., Pa., May 15,'95.
E. O. Jellinek, San Francisco; Univ. Vienna, Austria, Mar. 19,'92.
I. Katsuki, San Francisco; Med. Dept. Univ. of Cal., May 13,'96.
James Kingsbury, Los Angeles; Bellevue Hosp. Med. Coll., N. Y., Mar. 1,'77; Med. Dept. Univ. City N. Y., Mar. 18,'80; Med. Dept. Univ. Pa., Mar. 14,'81.
Carl R. Krone, Cazadero; Chicago Med. Coll., Ill., April 28,'91.
Wah Jean Lamb, San Francisco; Coll. Med., Univ. Southern Cal., June 3,'96.
Arthur S. Lee, San Francisco; Med. Dept. Univ. of Cal., May 13,'96.
Cornelius A. Logan, Los Angeles; Miami Med. Coll., Ohio, Feb. 28,'53.
Clarance L. Moloon, Elmhurst; Med. Dept. Univ. Cal., May 13,'96.
T. A. McCulloch, San Francisco; Med. Dept. Univ. Cal., July 13,'95.
J. G. McLeod, Sierra Madre; Coll. Med., Univ. Southern Cal., June 3,'96.
C. L. Morgan, San Francisco; Med. Dept. Univ. Cal., May 13,'96.
C. G. R. Montoux, East Oakland; Hosp. Coll. Med., Ky., Feb. 22,'77.
H. Morrow, San Francisco; Med. Dept. Univ. Cal., May 13,'96.
R. H. Orr, San Francisco; Med. Dept. Univ. Cal., May 13,'96.
V. E. Putnam, San Leandro; Med. Dept. Univ. Cal., May 13,'96.
M. B. Ryer, San Francisco; Med. Dept. Univ. Cal., May 13,'96.
J. T. Stafford, San Francisco; Med. Dept. Univ. Cal., May 13,'96.
A. A. Stern, San Francisco; Med. Dept. Univ. Cal., May 13,'96.
N. B. Waller, San Francisco; Med. Dept. Univ. Cal., May 13,'96.

CHAS. C. WADSWORTH, Secretary.

ITEMS.

Dr. A. Barkan has returned from Europe and has resumed the practice of his profession at 14 Grant Avenue, San Francisco, California. Hours, from 8 to 12 A. M.